

INVENTOR SEARCH

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L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:564650 HCAPLUS Full-text
 DOCUMENT NUMBER: 143:99272
 TITLE: Process for the production of ethers
 INVENTOR(S): Backes, Adrian Francis; Hiles, Andrew
 George; Sutton, David Mark
 PATENT ASSIGNEE(S): Davy Process Technology Limited, UK
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005058855	A1	20050630	WO 2004-GB5054	20041201
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004299317	A1	20050630	AU 2004-299317	20041201
CA 2548372	A1	20050630	CA 2004-2548372	20041201
EP 1694661	A1	20060830	EP 2004-801255	20041201
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
CN 1890230	A	20070103	CN 2004-80035623	20041201
BR 2004017625	A	20070327	BR 2004-17625	20041201
JP 2007516978	T	20070628	JP 2006-544534	20041201
IN 2006DN02858	A	20070810	IN 2006-DN2858	20060519
MX 2006PA06780	A	20060823	MX 2006-PA6780	20060615
NO 2006003214	A	20060711	NO 2006-3214	20060711
US 2007088169	A1	20070419	US 2006-582370	20060911
PRIORITY APPLN. INFO.:			GB 2003-29152	A 20031216
			WO 2004-GB5054	W 20041201

OTHER SOURCE(S): CASREACT 143:99272

AB A process for the production of an ether optionally with a diol and/or a lactone, by reaction of a corresponding organic feed material selected from unsatd. dicarboxylic acids and/ or anhydrides, mono-esters of unsatd. dicarboxylic acids and/or anhydrides, diesters of unsatd. dicarboxylic acids and/or anhydrides, unsatd. lactones, and mixts. of two or more thereof in the presence of hydrogen comprises the steps of (a) supplying a stream comprising at least a portion of the organic feed material to a pre-reactor zone comprising catalyst and operating under reaction conditions and contacting said feed with a hydrogen containing stream such that at least some of the carbon carbon double bonds are saturated; (b) vaporizing the at least partly saturated feed into the hydrogen containing stream in a vaporizing zone; (c) supplying the hydrogen-containing stream containing the vaporized at least

partially saturated feed to a reaction zone comprising catalyst and operating under reaction conditions; (d) recovering from the reaction zone a product stream comprising the ether and optionally diol and/or lactone; and (e) recycling depleted hydrogen-containing stream to at least the pre-reactor zone or the vaporization zone.

IC ICM C07D307-08
 CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 ST ether manuf
 IT Carboxylic acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (dicarboxylic, unsatd., diesters; process for the production of ethers)
 IT Carboxylic acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (dicarboxylic, unsatd., mono-esters; process for the production of ethers)
 IT Carboxylic acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (dicarboxylic, unsatd.; process for the production of ethers)
 IT Unsaturated compounds
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (lactones; process for the production of ethers)
 IT Ethers, preparation
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (process for the production of ethers)
 IT Anhydrides
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process for the production of ethers)
 IT Lactones
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (unsatd.; process for the production of ethers)
 IT 109-99-9P, Tetrahydrofuran, preparation
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (process for the production of ethers)
 IT 141-05-9, Diethyl maleate 623-91-6, Diethyl fumarate 624-48-6,
 Dimethyl maleate 624-49-7, Dimethyl fumarate 2459-05-4, Monoethyl
 fumarate 2756-87-8, Monomethyl fumarate 3052-50-4, Monomethyl maleate
 3990-03-2, Monoethyl maleate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (process for the production of ethers)
 IT 106-65-0P, Dimethyl succinate
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (process for the production of ethers)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2001:283903 HCAPLUS Full-text
 DOCUMENT NUMBER: 134:281261
 TITLE: Oxidative and hydrogenative process for the
 simultaneous production of maleic anhydride and its
 hydrogenated derivatives
 INVENTOR(S): Sutton, David Mark; Hiles, Andrew
 George; Backes, Adrian Francis
 PATENT ASSIGNEE(S): Kvaerner Process Technology Limited, UK
 SOURCE: PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027058	A1	20010419	WO 2000-GB3805	20001004
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2387268	A1	20010419	CA 2000-2387268	20001004
BR 2000014696	A	20020618	BR 2000-14696	20001004
EP 1220822	A1	20020710	EP 2000-964500	20001004
EP 1220822	B1	20040825		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003511428	T	20030325	JP 2001-530080	20001004
EP 1428812	A1	20040616	EP 2004-6321	20001004
EP 1428812	B1	20050727		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AU 775354	B2	20040729	AU 2000-75431	20001004
AT 274487	T	20040915	AT 2000-964500	20001004
CN 1537848	A	20041020	CN 2004-10032595	20001004
ES 2226920	T3	20050401	ES 2000-964500	20001004
AT 300511	T	20050815	AT 2004-6321	20001004
ES 2245773	T3	20060116	ES 2004-4006321	20001004
TW 228502	B	20050301	TW 2000-89123115	20001102
TW 232213	B	20050511	TW 2004-93114988	20001102
ZA 2002002572	A	20030402	ZA 2002-2572	20020402
IN 2002CN00506	A	20070803	IN 2002-CN506	20020408
NO 2002001715	A	20020411	NO 2002-1715	20020411
MX 2002PA03676	A	20031014	MX 2002-PA3676	20020411
US 6620949	B1	20030916	US 2002-110444	20020722
AU 2004201511	A1	20040506	AU 2004-201511	20040413
NO 2004001707	A	20020411	NO 2004-1707	20040426
IN 2004CH00599	A	20060106	IN 2004-CH599	20040623
JP 2005002128	A	20050106	JP 2004-221745	20040729
US 39794	E1	20070821	US 2005-229446	20050916
PRIORITY APPLN. INFO.:			EP 1999-308020	A 19991012
			AU 2000-75431	A3 20001004
			EP 2000-964500	A3 20001004
			JP 2001-530080	A3 20001004
			WO 2000-GB3805	W 20001004
			IN 2002-CN506	A3 20020408
			US 2002-110444	E 20020722

AB A process is described for the co-production of maleic anhydride and at least one C4 compound selected from 1,4-butanediol, γ -butyrolactone, and THF in which maleic anhydride is produced by partial oxidation of a hydrocarbon feedstock selected from C4 hydrocarbons and benzene to yield a vaporous reaction effluent stream comprising maleic anhydride, water, unconverted hydrocarbon feedstock, and carbon oxides. A part of the maleic anhydride present in the vaporous reaction effluent stream is condensed to form a crude maleic anhydride stream and leaves a residual vaporous stream containing residual amts. of maleic anhydride. Further maleic anhydride is absorbed from the residual vaporous stream by absorption in an organic solvent, water or an aqueous solution. Maleic anhydride is then recovered from the loaded liquid absorption medium. At least one C4 compound is produced by hydrogenation of a

C4+ hydrogenation feedstock selected from maleic anhydride, maleic acid, dialkyl maleates, and mixts. of two or more thereof. The process is characterized in that material of the crude maleic anhydride stream is used as the C4+ hydrogenation feedstock or is used to prepare the C4+ hydrogenation feedstock.

- IC ICM C07C027-12
ICS C07C051-215; C07C051-31; C07C057-145; C07D307-60; C07D307-08;
C07D307-33; C07C029-149; C07C031-20
- CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 27, 48
- ST maleic anhydride oxidative manuf; oxidn butane prepn maleic anhydride;
hydrogenation maleic anhydride
- IT Hydrocarbons, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(C4; oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT Oxidation
(gas-phase, partial; oxidative and hydrogenative process for the
simultaneous production of maleic anhydride and its hydrogenated derivs.)
- IT Hydrogenation
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 7732-18-5P, Water, preparation
RL: BYP (Byproduct); NUU (Other use, unclassified); PREP (Preparation);
USES (Uses)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 7440-50-8, Copper, uses 11104-65-7, Copper chromite
RL: CAT (Catalyst use); USES (Uses)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 1314-56-3, Phosphorus oxide, reactions 1314-62-1, Vanadium oxide,
reactions 7440-62-2, Vanadium, reactions
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES
(Uses)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 96-48-0P, γ -Butyrolactone 109-99-9P, THF, preparation 110-63-4P,
1,4-Butanediol, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 108-31-6P, Maleic anhydride, preparation 110-16-7DP, Maleic acid,
dialkyl esters 110-16-7P, Maleic acid, preparation 624-48-6P, Dimethyl
maleate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 67-56-1, Methanol, reactions 71-43-2, Benzene, reactions 106-97-8,
Butane, reactions 7782-44-7, Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative and hydrogenative process for the simultaneous production of
maleic anhydride and its hydrogenated derivs.)
- IT 88-99-3D, Phthalic acid, dialkyl esters 1687-30-5D, Hexahydrophthalic
acid, dialkyl esters
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; oxidative and hydrogenative process for the simultaneous
production of maleic anhydride and its hydrogenated derivs.)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

10/582,370

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RESULTS FROM REGISTRY, CAPLUS, AND USPATFULL

=> d que stat 129

L7 1 SEA FILE=REGISTRY ABB=ON CARBON/CN
 L8 95808 SEA FILE=HCAPLUS ABB=ON ?ETHER?(4A)?PREP?
 L9 11236 SEA FILE=HCAPLUS ABB=ON L8 AND (?DIOL? OR ?LACTONE?)
 L10 2 SEA FILE=HCAPLUS ABB=ON L9 AND ?ORGANIC?(W) (?FEED? OR ?FOOD?)
 L11 19 SEA FILE=HCAPLUS ABB=ON L9 AND (?DICARBOXYLIC?(W) ((?ACID? OR
 ?ANHYDRID? OR ?ESTER?)) (4A)?UNSAT?)
 L12 2636 SEA FILE=HCAPLUS ABB=ON L9 AND (?VAPOR? OR ?CATALYST? OR
 (?PRE?(W)?REACT? OR ?PREREACT?))
 L13 488 SEA FILE=HCAPLUS ABB=ON L12 AND (?CONTACT?(W)?AREA? OR
 ?HYDROGEN?)
 L14 8 SEA FILE=HCAPLUS ABB=ON L13 AND (L7 OR ?CARBON?) (4A) (?DOUBLE?(
 W)?BOND?)
 L15 19 SEA FILE=HCAPLUS ABB=ON L13 AND ?LIQUID?(W)?PHASE?
 L16 46 SEA FILE=HCAPLUS ABB=ON L10 OR L11 OR L14 OR L15
 L17 3 SEA FILE=HCAPLUS ABB=ON L16 AND ?ORGANIC?(4A)?SOLV?
 L18 46 SEA FILE=HCAPLUS ABB=ON L16 OR L17
 L19 26 SEA FILE=HCAPLUS ABB=ON L18 AND ?UNSAT?
 L20 23 SEA FILE=HCAPLUS ABB=ON L19 AND (PRD<20031216 OR PD<20031216)
 L21 20637 SEA FILE=USPATFULL ABB=ON L9 AND (?VAPOR? OR ?CATALYST? OR
 (PRE(W)?REACT? OR ?PREREACT?))
 L22 17471 SEA FILE=USPATFULL ABB=ON L21 AND (?CONTACT?(W)?AREA? OR
 ?HYDROGEN?)
 L23 1910 SEA FILE=USPATFULL ABB=ON L22 AND (L7 OR ?CARBON?) (4A)?DOUBLE?
 (W)?BOND?
 L24 109 SEA FILE=USPATFULL ABB=ON L23 AND ?LIQUID?(W)?PHASE?
 L25 74 SEA FILE=USPATFULL ABB=ON L24 AND ?ORGANIC?(4A)?SOLV?
 L26 63 SEA FILE=USPATFULL ABB=ON L25 AND ?UNSAT?
 L27 48 SEA FILE=USPATFULL ABB=ON L26 AND (PRD<20031216 OR PD<20031216
)
 L28 71 DUP REMOV L20 L27 (0 DUPLICATES REMOVED)
 L29 37 SEA L28 AND ?CARBOXYLIC?(W) ?ACID?(P) ?REACT?

=> d ibib abs 129 1-37

L29 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:275912 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:312063
 TITLE: Preparation of MWW-type titanasilicate zeolites as
 epoxidation catalysts for carbon-
 carbon double bonds
 INVENTOR(S): Oguchi, Wataru; Tsuji, Katsuyuki; Tatsumi, Takashi;
 Wu, Peng
 PATENT ASSIGNEE(S): Showa Denko K. K., Japan
 SOURCE: PCT Int. Appl., 53 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028774	A2	20020411	WO 2001-JP8469	20010927 <--
WO 2002028774	A3	20030220		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT,
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO,
 RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
 VN, YU, ZA, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 JP 2002102709 A 20020409 JP 2000-298133 20000929 <--
 CA 2423666 A1 20020411 CA 2001-2423666 20010927 <--
 AU 2001090295 A5 20020415 AU 2001-90295 20010927 <--
 EP 1324948 A2 20030709 EP 2001-970254 20010927 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 US 2003040649 A1 20030227 US 2001-959937 20011113 <--
 US 6759540 B2 20040706
 US 2004034258 A1 20040219 US 2003-373168 20030226 <--
 US 2004092757 A1 20040513 US 2003-692685 20031027 <--
 PRIORITY APPLN. INFO.: JP 2000-298133 A 20000929 <--
 US 2000-247963P P 20001114 <--
 WO 2001-JP8469 W 20010927 <--
 US 2001-959937 A2 20011113 <--

AB Crystalline MWW-type titanasilicate zeolites were prepared for use as an oxidation, especially an epoxidn., catalyst for compds. containing a carbon - carbon double bond using a peroxide (preferably H₂O₂) as the oxidizing agent. The titanasilicate zeolites, which have the general composition xTiO₂.yM₂O₃.(1-x-2y)SiO₂, in which M is Al, B, Cr, Ga, and Fe; y = 0.0001-0.1, x = 0.0001-0.2, are prepared by copptn. of a titania precursor (e.g., Ti oxides, Ti halides, and tetraalkyl orthotitanates), a silica precursor (e.g., silicic acid, Si halides, fumed and colloidal SiO₂, and tetraalkyl orthosilicates), a secondary metal oxide precursor (e.g., H₃BO₃ and borate salts, B₂O₃, boron halides, and trialkylborons), in the presence of piperidine and hexamethylenimine template. The epoxidn. is especially suitable for reaction of unsatd. ethers and is compatible with a wide variety of functional groups.

L29 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:227701 HCAPLUS Full-text

DOCUMENT NUMBER: 132:251879

TITLE: Cold temperature-flexible weather-resistant unsaturated linear polyesters and manufacture and uses thereof

INVENTOR(S): Mahbub, Paul; Airola, Karri; Valtonen, Eija

PATENT ASSIGNEE(S): Neste Chemicals Oy, Finland

SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000018820	A1	20000406	WO 1999-FI799	19990929 <--
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			

10/582,370

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

FI 9802089	A	20000330	FI 1998-2089	19980929 <--
FI 9900195	A	20000330	FI 1999-195	19990202 <--
AU 9959865	A1	20000417	AU 1999-59865	19990929 <--
EP 1124877	A1	20010822	EP 1999-969726	19990929 <--
EP 1124877	B1	20050420		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

CN 1134479	B	20040114	CN 1999-811510	19990929 <--
AT 293650	T	20050515	AT 1999-969726	19990929 <--
ES 2241365	T3	20051016	ES 1999-969726	19990929 <--
US 6489406	B1	20021203	US 2001-806337	20010329 <--

PRIORITY APPLN. INFO.:

FI 1998-2089	A	19980929 <--
FI 1999-195	A	19990202 <--
WO 1999-FI799	W	19990929 <--

AB Title liquid unsatd. polyesters are prepared by reacting 5-30 mol% of ≥ 1 ethylenically unsatd. dicarboxylic acids (A), 20-45 mol% of ≥ 1 other aliphatic or aromatic acids (B), and 40-60 mol% of ≥ 2 polyhydric alcs. (C) selected from polyethylene glycol, polypropylene glycol and their derivs., with a 60-80:20-40 mol ratio of difunctional-trifunctional polyhydric alcs., until an acid value of 5-35 is reached, and diluting with 30-60 weight% of one or more reactive monomers. The linear unsatd. polyesters have cone and plate viscosity (I.C.I.) 2-20 P/125° and Mw 20,000-100,000. Extending the processing to low acid values gives polyesters with very high mol. wts., solubility, and elongation retention, and cured products having good subzero flexibility, elongation properties and flexibility, such as sealants, insulating materials, etc. (no data). Thus, isophthalic acid 0.4, polypropylene oxide diol 0.4, and polypropylene oxide triol 0.1 M were polymerized in the presence of a metal catalyst to acid value <10, the mixture cooled and reacted with 0.1 mol maleic acid to acid number <20, giving a polyester having cone and plate viscosity 11.5 P, Mn 7500, and Mw 78,000, which was diluted to 40% styrene and cured with Me Et ketone peroxide and a Co salt, giving elongation at +20° 420% and at -20° 210% and 400% and 105%, resp., after a boiling water test.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:227353 HCAPLUS Full-text

DOCUMENT NUMBER: 128:283171

TITLE: Preparation of unsaturated polyesters without using toxic substances in simple process at low cost

INVENTOR(S): Ito, Takashi; Kido, Nobuaki; Matsumura, Shunichi

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

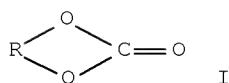
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10095840	A	19980414	JP 1996-252910	19960925 <--
PRIORITY APPLN. INFO.:			JP 1996-252910	19960925 <--

GI

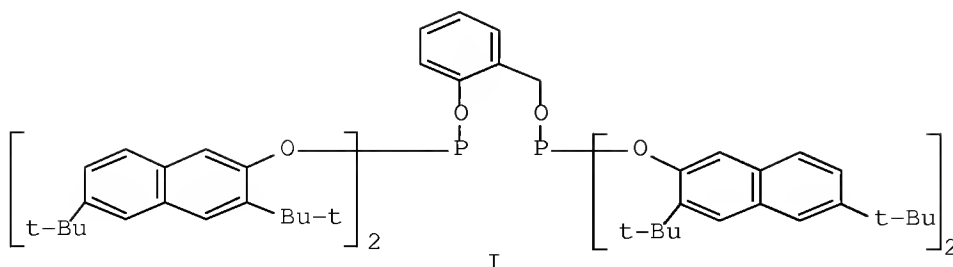


AB Title polyesters are prepared by (1) melt reaction of (A) aromatic diols and (B) alkylene carbonates I ($R = C2-5$ alkylene to form 5- or 6-membered ring structure) at the equiv ratio of $1.8a \leq b \leq 3a$ in the presence of (C) catalysts until ≥ 75 mol% CO_2 is produced against OH equiv of (A) (2) mixing them with (D) aliphatic unsatd. acids, (E) organic dicarboxylic acids, and (F) aliphatic and/or alicyclic diols at the equiv ratio of $a < (d + e) \leq 100a$, $0.1 \leq d/(d + e) \leq 0.9$, and $1.1(d + e - a) \leq f \leq 10(d + e - a)$, and (3) their melt-polymerization them [a, b, d, e, and f mean equiv number of (A), (B), (D), (E), and (F), resp.]. The polyesters may be prepared by (1) heating mixts. of (D), (E), and (F) at the above equiv ratio until esterification rate becomes $\geq 80\%$ against (D) and (E), (2) mixing them with (A) and (B) at the above equiv ratio, and (3) melt-treating them in the presence of (C) until ≥ 75 mol% CO_2 gas is produced against OH equiv of (A). Thus, 114 parts 2,2-bis(4-hydroxyphenyl)propane (II) and 112 parts propylene carbonate were melt-treated in the presence of $NaCO_3$ until 196 mol% CO_2 was produced against OH equiv of II, and then mixed with maleic anhydride 49, terephthalic acid 74, and propylene glycol 46 parts and melt-polymerized to give a polymer.

L29 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1997:129971 HCAPLUS Full-text
 DOCUMENT NUMBER: 126:157182
 TITLE: Method for producing aldehydes by hydroformylation of olefins
 INVENTOR(S): Mori, Tomoyuki; Takai, Masaki; Inoe, Tomohiko
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08337550	A	19961224	JP 1996-81401	19960403 <--
JP 3959754	B2	20070815		
US 5648554	A	19970715	US 1996-632356	19960410 <--
PRIORITY APPLN. INFO.:			JP 1995-86906	A 19950412 <--

GI



AB A method for producing aldehydes by hydroformylation of olefinic unsatd. compds. with CO and H in the presence of a group VIII metal-phosphite complex catalyst in liquid phase is claimed, wherein the reaction product liquid containing the complex catalyst and high b.p. byproducts is closely contacted with an extraction solution containing a polar solvent to selectively extract either the complex catalyst or high b.p. byproducts and then the extraction liquid layer is separated from the reaction product liquid layer. Selective extraction of the high b.p. byproducts with an extraction solution containing alkanols, carboxylic acids, or amides is claimed. Selective extraction of the complex catalyst with an extraction solution containing amines, nitriles, ketones, or ethers is claimed. Thus, $[\text{Rh}(\text{OAc})(\text{COD})]_2$ and phosphite (I) were precarbonylated with oxo gas at 10 kg/cm² G and 80° in PhMe for 1 h to give a precarbonylated catalyst liquid. Propylene underwent hydroformylation with oxo gas in the presence of rhodium acetate and Ph₃P at 17 kg/cm²G and 100° in PhMe and after removing oxo gas and unreacted propylene, the reaction liquid was distilled to give aldehydes at 119° and 490 mmHg and the catalyst liquid was recycled to the hydroformylation. The catalyst liquid recycled 32 times in this process was distilled at 70 mmHg and 150° to remove the solvent and steam-distilled at 153° to give a high b.p. byproducts mainly consisting of aldehyde dimers or trimers. A model catalyst liquid containing Rh 50 mg/L, b1 0.2, BuOH 2.1, high b.p. byproducts 48.6, and toluene 49.3 weight% was prepared by adding BuOH and the high b.p. byproducts to the precarbonylated catalyst and subjected to extraction using a variety of solvents, e.g. aqueous AcOH, ethylene glycol, 1,4-butanediol, aqueous MeOH, DMF/H₂O (4/1), H₂O/N-methylpyrrolidone (4/1), aqueous formic acid, sulfolane/H₂O (4/1), Me Et ketone/H₂O (4/1), aqueous acetone, aqueous MeCN, Et₂O/H₂O (4/1), and aqueous dioxane. Kp value for aqueous AcOH was 0.011 for the catalyst complex and 0.234 for the high b.p. byproducts, that for 1,4-butanediol being 0.004 and 0.181, resp., and that for Me Et ketone/H₂O (4/1) being 0.084 and 0.000, resp.

L29 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1969:451319 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 71:51319

TITLE: Water-dilutable binders for electrophoresis

PATENT ASSIGNEE(S): Reichhold Chemie A.-G.

SOURCE: Fr., 4 pp.

CODEN: FRXXAK

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1541164		19681004	FR 1967-120219	19670907 <--

DE 1620239

DE

GB 1163369

GB

PRIORITY APPLN. INFO.:

DE

19661229 <--

AB Water-dilutable binders for electrophoresis were prepared by heating hardenable ethers of methylolaminotriazines and (or) methylolureas with the addition products of α,β -unsatd. dicarboxylic acids (or anhydrides) and driers or their fatty acids followed by transformation of the resins formed into water soluble products by addition of NH_3 or organic N bases. A hardenable ether of a methylolmelamine was prepared as follows: 780 g. hexakis(methoxymethyl)melamine (Cymel 300 or 301) was dissolved in 456 g. 1,2-propylene glycol (I) at 40°, 2.75 cc. 10 weight % H_3PO_4 added, the mixture kept 24 hrs., 128 g. MeOH distilled to an internal temperature of 128–37°, 500 g. xylene added, and 1.18 cc. 5N NaOH added to neutralize the H_3PO_4 . Excess I was eliminated by azeotropic distillation, the distillate passed into 30 cc. xylene and 70 cc. H_2O to extract I, and the xylene- H_2O mixture replaced every 2 hrs. The xylene was removed at 75–80°/15–20 mm. to give 875 g. resin (II) having OH index 188. A mixture of 430 parts linseed oil (III) and 100 parts maleic anhydride (IV) was heated to 180–210° until the free IV content was <3%. A mixture of II 36.6, the addition product of III and IV 160, and trimethylolpropane 28.8 parts was heated at 80–5° to a viscosity of 60 sec. in 50% butylene glycol (4 DIN 53 211). The product was neutralized in the presence of water with Et_3N to pH 7.8–8.0 for a 10% aqueous solution and the resin was diluted with pure H_2O to 10% solids. The solution was used for the separation of synthetic resins by electrophoresis and in coating.

L29 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1963:474831 HCAPLUS Full-text

DOCUMENT NUMBER: 59:74831

ORIGINAL REFERENCE NO.: 59:13814h,13815a-g

TITLE: Polyfunctional monomers as additives for noninhibited polyester lacquers

AUTHOR(S): Mleziva, J.; Vlcek, J.; Ruzickova, J.; Micek, J.

CORPORATE SOURCE: Vyzkumny Ustav Syntetickych Pryskyric Laku, Pardubice, Czech.

SOURCE: Chemicky Prumysl (1963), 13(6), 328–33

CODEN: CHPUA4; ISSN: 0009-2789

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Bis(glycerol monoallyl ether) succinate (I), glutarate (II), adipate (III), phthalate (IV), fumarate (V), and maleate (VI), and tris(glycerol monoallyl ether) citrate (VII) were prepared from allyl glycidyl ether (VIII) and the corresponding acid. Bis(glycerol α,α' -diallyl ether) succinate (IX), glutarate (X), adipate (XI), phthalate (XII), maleate (XIII), and fumarate (XIV), tris(glycerol α,α' -diallyl ether) citrate (XV) and glycerol α,α' -diallyl ether methacrylate (XVI) were prepared from glycerol α,α' -diallyl ether (XVII) and the corresponding acid. These esters were investigated in order to protect unsatd. polyester resins against aft inhibition by replacing part of the styrene monomers with the esters. The esters of glycerol monoallyl ether (except VI) were prepared by heating excess VIII with a dicarboxylic acid under N in the presence of 0.05% N-ethylpiperidine 1–5 hrs. at 150°. When the acid number was >15, the reaction product was stabilized with 0.02% hydroquinone and cooled. The acid-VIII molar ratios and the reaction time (in hrs.) were as follows: I, 0.371, 5; II, 0.410, 4.6; III, 0.410, 2.5; IV, 0.389, 5; V, 0.410, 1; VII, 0.221, 2.25. The properties of crude esters, containing polymerization products and acid esters, were [product, acid number, hydroxyl number, n_{20D} , viscosity at 20° (cp.) and d_{20} given]: I, 12.8, 284.2, 1.4720, 253.8, 1.1470; II, 0.4, 305.3, 1.4700, 331.2, 1.1233; III, 0.5, 271.0, 1.4715, 384.6, 1.201; IV, 8.1, –, 1.5100, 2749,

1.1764; V, 2.5, 287.7, 1.4850, 686.0, 1.1622; VII, 17.7, 268.0, 1.4802, 2464, 1.1951. Because the heating of VIII with maleic acid at 150° caused gelation, VI was prepared by adding 1 part VIII to maleic acid during 1 hr.; the temperature was raised from 60° to 150°. The second part of VIII was added at 150° and the mixture was heated 1 hr. at the same temperature. The excess of VIII was greater than that for other esters. α -Glycerol monoallyl ether α -allylmaleate (XVIII) and α -glycerol monoallyl ether α' -butylmaleate (XIX) were prepared by heating 0.61 mole VIII and 0.5 mole monoallyl or monobutyl maleate, 5 hrs. at 150°. The properties of crude esters were [ester, acid number, hydroxyl number, viscosity at 20° (cp.), and n_{20D} given]: XVIII, 29.7, 132.9, 1480, 1.4855; XIX, 32.0, 170.8, 205, 1.4705; VI, 18.2, -, 2100, -. XVII (n_{20D} 1.4520, d₂₀ 0.9827, hydroxyl number 345) was prepared in 88% yield. Allyl alc. (250 g.) and 580 g. NaOH was stirred at 80°. The mixture of 1310 g. epichlorohydrin and 2370 g. allyl alc. was dropped in at 98°. Then the reaction mixture was boiled 1 hr., cooled, neutralized with HCl, and filtered. The excess allyl alc. was distilled and the fraction, b₈₋₁₀ 105-7°, was collected. The esters of XVII were prepared by heating equivalent quantities of XVII and the corresponding acid in the presence of an acid catalyst (H₂SO₄ or KHSO₄) and an inhibitor; then the mixture was diluted with Et₂O, decolorized with activated C, neutralized with 10% NaHCO₃, washed with H₂O, dried with Na₂SO₄, and then the diluent was distilled. Only XVI can be distilled under reduced pressure. The reaction temperature and time (hrs.) were as follows: IX, 157-86°, 15; X, 165-97°, 16; XI, 152-87°, 9; XII, 165-215°, 14; XIII, 175-84°, 3 (10% xylene added); XIV, 171-9°, 9 (10% xylene added); XV, 155-82°, 13; XVI, 160-81°, 9 (10% xylene added). IX, X, XI, and XII were prepared with 0.25% H₂SO₄; XIII, XIV, XV, and XVI were prepared with 5% KHSO₄ as catalyst. The properties of crude esters, containing unchanged IX and acid esters, are [ester, acid number, hydroxyl number, ester number, d₂₀, n_{20D}, and viscosity at 20° (cp.) given] IX, 3.3, 51.3, 273.7, 1.0861, 1.4679, 76.4; X, 6.1, 17.6, 260.9, 1.0633, 1.4664, 47; XI, 2.5, 42.0, 255.4, 1.0585, 1.4661, 57; XII, 1.6, 31.2, 216.4, 1.1616, 1.5180, 1555; XIII, 0.0, 8.1, 260.3, 1.0344, 1.4700, 25.6; XIV, 0.0, 11.0, 258.9, 1.0255, 1.4633, 24.9; XV, 8.7, 86.7, 249.2, 1.1196, 1.4786, 400; XVI, 0.0, 2.3, 232.1, 0.9864, 1.4547, 5 (b. 110°/0.5 mm.). The unsatd. polyester lacquers consisting of 70 parts usual unsatd. polyester resin and 30 parts above esters are investigated. The properties of lacquers and coatings are given. The best properties are achieved with V. It is very reactive and polymerizes at room temperature after usual initiation with the Me Et ketone peroxide-Co naphthenate system. Its addition to usual unsatd. polyester resins results in theft air-drying to high quality coatings. Generally, similar action is shown by all tested glycerol monoallyl and diallyl ether esters of α,β -unsatd. dicarboxylic acids.

L29 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1955:1412 HCAPLUS Full-text

DOCUMENT NUMBER: 49:1412

ORIGINAL REFERENCE NO.: 49:360a-i,361a-d

TITLE: Steroids and sex hormones. CXCI. The configurative combination of lanostadienol with cyclic diterpenes and triterpenes

AUTHOR(S): Kyburz, E.; Riniker, B.; Schenk, H. R.; Heusser, H.; Jeger, O.

CORPORATE SOURCE: Tech. Hochschule, Zurich, Switz.

SOURCE: Helvetica Chimica Acta (1953), 36, 1891-1900

CODEN: HCACAV; ISSN: 0018-019X

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 48, 11457d. The configurative relationship between lanostadienol (I) with the diterpene manool (II) is demonstrated by the degradation of I to a bicyclic C14 acid, which is also obtained on degradation of II. Adding dropwise (20 min.) 12 cc. 30% H₂O₂ to 420 mg. of the unsatd. triketone III (cf. Voser, et al., C.A. 47, 11216d) in 21 cc. dioxane and 2.1 g. KOH in 21 cc. MeOH at 50°, keeping the mixture 20 min. at 50°, acidifying it with 2N H₂SO₄, and extracting with ether give 400 mg. unsatd. keto dicarboxylic acid, m.

249–51° (decomposition), $[\alpha]_D^{25}$ 3° (c 1.01, EtOH), λ_{maximum} 242 m μ , log ϵ 3.85. Heating 400 mg. of this acid in 100 cc. AcOH slowly to boiling, adding 4 g. Zn dust and, after 2 h., another 4 g., and heating the mixture another 2 h. give 400 mg. saturated keto dicarboxylic acid (IV), m. 216–17° (decomposition), $[\alpha]_D^{25}$ 24° (c 1.13, EtOH) [di-Me ester (V), prepared with CH₂N₂ in ether and purified chromatog., m. 143.5–4°, $[\alpha]_D^{30}$ (c 1.05, all rotations in CHCl₃), λ_{maximum} 290–305 m μ , log ϵ 1.8]. Heating 900 mg. V in 100-mg. portions in a sealed tube 0.5 h. at 350–60° and distilling the combined material in a high vacuum give 170 mg. oil (VI), b_{0.01} up to 145°. The residue (730 mg.) is chromatographed over Al₂O₃, giving 620 mg. enol lactone VII, crystals from CH₂Cl₂-MeOH, m. 153–4°, $[\alpha]_D^{77}$ (c 1.01), λ_{maximum} 222 m μ , log ϵ 3.88; it gives a yellow color with C(NO₂)₄. Refluxing 620 mg. VII with 200 cc. N KOH-MeOH 2 h., keeping the mixture 16 h. at 20°, methylating the acid reaction products with CH₂N₂, and chromatographing the crude ester give 580 mg. V. Refluxing 242 mg. VI in 10 cc. MeOH and 1 cc. AcOH 2 h. with 1 g. Girard reagent T (VIII) gives 138 mg. unsatd. ester IX, b_{0.09} 90–100°, $[\alpha]_D^{38}$ (c 1.73), which gives a yellow-brown color with C(NO₂)₄ and, on hydrogenation in AcOH with PtO₂, absorbs 1.1 mol H. Distillation of the ketonic portion gives 104 mg. keto Me ester X, b_{0.01} 110–25°, $[\alpha]_D^{38}$ (c 0.81) (2,4-dinitrophenylhydrazone, m. 216–17°). Reduction of 121 mg. X in 4 cc. AcOH with 2.5 g. Zn wool with the dropwise addition (5 h) of 7 cc. concd HCl, then adding another 2.5 g. Zn wool, 3 cc. AcOH, and 1 cc. concentrated HCl, and refluxing the mixture another 12 h. give 64 mg. bicyclic acid (XI), m. 164–6° (after crystallization from C₅H₁₂ and sublimation in a high vacuum), $[\alpha]_D^{39}$ (c 1.05) [S-benzylthiuronium salt, m. 161° (decomposition)]. Adding in small portions (6 h.) 280 cc. concentrated HCl to 6.4 g. Me decahydro-2-oxo-5,5,8a-trimethyl-1-naphthalene propionate (XII) (cf. C.A. 47, 4309c) and 90 g. amalgamated Zn wool in 60 cc. refluxing AcOH, adding another 60 cc. AcOH, and refluxing the mixture overnight give 5.1 g. corresponding deoxy acid (XIII), m. 118–19°, $[\alpha]_D^{48}$ (c 0.73). Methylation of 5 g. crude XIII with CH₂N₂ and treating the Me ester with VIII give 35 mg. XII and 4.7 g. pure Me ester (XIV) of XIII, b_{0.2} 115–19°, $[\alpha]_D^{42}$ (c 1.8). Treating 3.5 g. XIV in 100 cc. absolute ether with PhMgBr (from 30.5 g. PhBr), refluxing the mixture 1 h., distilling off the ether, replacing it by C₆H₆, refluxing the solution another 6 h., decomposing the mixture in the usual way, distilling off the Ph₂ with steam, and chromatographing the residue over Al₂O₃ give 3.7 g. carbinol which, refluxed 2 h. in 30 cc. AcOH and 10 mg. iodine and the dehydrated material (3.6 g.) chromatographed, gives 3.4 g. diphenylethylene derivative (XV) R'CH₂CH:CPh₂ [R' = decahydro-5,5,8a-trimethyl-1-naphthyl], m. 90–90.5°, $[\alpha]_D^{43}$ (c 1.0), λ_{maximum} 252 m μ , log ϵ 4.21. Passing O₃ into 2.6 g. XV in 100 cc. EtCl at –70° until a faint blue color persists, distilling off the solvent, boiling the residue 2 h. with H₂O, and oxidizing the product with freshly prepared Ag₂O 18 h. at 20° give 1.16 g. R'CH₂CO₂H, m. 121–1.5°, $[\alpha]_D^{7.5}$ (c 1.3) [Me ester (XVI), b_{0.15} 118–23° (bath temperature), $[\alpha]_D^9$ (c 1.6)]. Degradation of 1.1 g. XVI in the same way as XIV gives 1.2 g. amorphous hydrocarbon R'CH:CPh₂ which on ozonization gives 450 mg. XI, needles, m. 166–7°, $[\alpha]_D^{40}$ (c 1.2) [Me ester, b_{0.1} 100–10°; benzylthiuronium salt, needles, m. 160–1° (decomposition)]. Because II was linked earlier to the diterpene, abietinic acid, and the triterpenes, ambrein and oleanolic acid, the present results indicate that I has the same constitution and

configuration of the connection points of the rings A and B as these natural products.

L29 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1935:60725 HCAPLUS Full-text

DOCUMENT NUMBER: 29:60725

ORIGINAL REFERENCE NO.: 29:7956a-i,7957a

TITLE: Ring cleavage of nitrophenols by sulfuric acid. II

AUTHOR(S): Neunhceffer, Otto

SOURCE: Berichte der Deutschen Chemischen Gesellschaft
[Abteilung] B: Abhandlungen (1935), 68B,
1774-81

CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C. A. 29, 2936.5. Two further examples are given of the conversion of readily available nitrophenols into unsatd. and saturated dicarboxylic acids ($\Delta^2,3$ -hydromuconic acid (I) and cyclopentane-1,2-diacetic acid (II)) with concentrated H_2SO_4 . For good results on a preparative scale, the exptl. conditions must be rigidly controlled. In most cases it is necessary to use 100% H_2SO_4 , and an excess of free SO_3 is also to be avoided. The temperature must be determined for each individual case by a preliminary experiment. For a given product, this may differ with the purity of the material; pure materials permit of raising the temperature and greatly facilitate the reaction. The resulting muconic acids readily form lactones with production of a double bond; the double bond may shift toward the point of ring closure and hydrolysis will then give enols of β -ketonic acids which may change over into levulinic acids by loss of CO_2 . This change takes place with special ease under the influence of alc. and concentrated H_2SO_4 . In purifying the nitrophenols this must be borne in mind, since in the presence of very small amts. of alc. the above reaction may occur during the cleavage and the levulinic acid be converted into unpromising tars by the excess of H_2SO_4 . Ether containing alc. may also have a deleterious effect in the extraction of the muconic acids. The 4,2-Cl-(O₂N)C₆H₃OH used in preparing I was obtained in 90% yield from p-ClC₆H₄OH in aqueous suspension with 30% HNO_3 ; 80 g. added in the course of 20 min. to 400 cc. of 100% H_2SO_4 at 110° and then heated a short time at 125° gave 6 g. of the pyrrolone HO₂CCH: C. CCl: CH. CO. NH (formed from the mucohydroxamic acid by loss of water and ring closure), m. 250° (decomposition) (Me ester, m. 133°); the mother liquors on extraction with ether yielded 70 g. 2-chloromuconic acid, C₆H₅O₄Cl (III), m. 123°, which formed a neutral mono-Me ester, m. 40°. (The formation of this neutral mono-Me ester is said to indicate that the solid III is a lactone, but the formula given for the lactone, HO₂CCHCH.CCl:CH.CO.O, is evidently a mistake.- Abstract). In solution, III behaves as a dicarboxylic acid. Reduction with Na-Hg in strongly alkaline solution gives I, m. 195° (4 g. from 10 g. III); moderated reduction in Na_2CO_3 solution gives muconic acid, m. 260°, but with much by-products. The reduction proceeds better in acid reaction, coppered Zn in 20% H_2SO_4 giving I almost quant. I is also obtained directly in 12 g. yield from 20 g. 4,2-Cl(O₂N)C₆H₃OH heated with 100% H_2SO_4 , poured upon ice, shaken with charcoal, filtered and slowly treated cold with coppered Zn. In 1 case β -hydroxymuconic acid, m. 198° (decomposition), was isolated, but because of its instability, especially in solution, the exact conditions for its preparation have not yet been established. For the preparation of II 5-aminohydrindene was converted by diazotization in KNO_3 - H_2SO_4 solution and heating to 40° into 6-nitro-5-hydroxyhydrindene (IV), m. 66° (yield, 62%); Me ether (V), m. 77°. Dinkelsbubler (Ber. 33, 2896(1900)) describes a hydroxynitrohydrindene, m. 40°, but attempts to prepare it showed that it is a

mixture of isomers in which IV predominates; diazotization of 5-aminohydrindene in H₂SO₄ and decomposition in boiling solution with CuSO₄-Na₂SO₄ gave 88% 5-hydroxyhydrindene, m. 55°, which with HNO₃ gave chiefly IV, together with darker yellow crystals of the 4-nitro isomer, m. 74° (Me ether, m. 94°). The structure of IV was established by oxidation of its Me ether with KMnO₄ to 4,5,1,2-C₆H₂-(OMe)(NO₂)(CO₂H)₂, m. 202° (di-Me ester, m. 115°). With H₂SO₄ at 65° (at temps. above 100° complete decomposition takes place) 15 g. IV gives 15 g. of an acid (V), m. 169°, the composition of which (N, 8.05%) indicates that it is the cyclic dehydration product, of the hydroxamic acid, although it gives hydroxamic acid reactions (intense red color with FeCl₃, yellow color with Cu(OAc)₂). Refluxed with 15% HCl in MeOH, it gives NH₂OMe and 40% of a neutral ester, b₁₅ 165°, saponified by dilute NaOH to a doubly unsat'd. cyclopentanediacetic acid, m. 220° (decomposition). With H and Pt oxide in alc. V smoothly yields a mixture of cis- and trans-II, the cis-content of which can be so increased by fractional extraction with ether that a product m. 171° is obtained.

L29 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1911:7796 HCAPLUS Full-text

DOCUMENT NUMBER: 5:7796

ORIGINAL REFERENCE NO.: 5:1403b-i,1404a-i,1405a-g

TITLE: Action of Unsaturated Dicarboxylic Acids on p-Aminophenols

AUTHOR(S): Piutti, Arnaldo; et al.

SOURCE: Gazzetta Chimica Italiana (1911), 40(I), 488-568

CODEN: GCITA9; ISSN: 0016-5603

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB Maleic anhydride (5 g.) in dry C₆H₆, poured into a suspension of 5.6 g. p-HOC₆H₄NH₂ sulfite in Me₂CO and boiled until all is dissolved, gives p-hydroxyphenylmaleinamic acid (I), yellow crusts consisting of HCC(: NC₆H₄OH)OH HCC(: NC₆H₄OH)O fine needles from alc., greenish yellow prisms turning brown in air from alc.-H₂O, m. 182°. FeCl₃ produces no color. Methyl ether, from the anhydride and anisidine in C₆H₆, canary-yellow dichroic needles or long yellow prisms with greenish yellow pleochroism (oblique extinction, angle about 10°), m. 180-1° (gas evolution). FeCl₃ produces a yellowish brown color changing to violet. Ethyl ether, slender yellow needles grouped in spheres or long canary-yellow prisms, pleochroitic with oblique extinction (angle 19-20°), m. 181-2°. With FeCl₃ it reacts like the Me ether. In alc. at 140-50° after 5-6 hrs. it gives 10-12% of p-ethoxyphenylfumarodiamide (see below). The amic acid, heated on the H₂O bath with 20 pts. Me₂CO and 7 pts. AcCl until dissolved and treated with air to remove the volatil products, gives as-p-hydroxyphenylmaleinimide (II), needles grouped in rosettes from alc., heavy prisms from alc.-H₂O, m. 154-5°. Methyl ether, tabular elongated crystals from H₂O, needles from alc.-H₂O, perpendicular extinction, m. 145-6°. Ethyl ether, needles, m. 127°. If POCl₃ is used instead of AcCl, the yield is reduced from 95 to 60% because the acid, losing H₂O at the higher temperature, gives rise to secondary products. With Na-Hg in alc. the ethoxyimide gives the corresponding succinamic acid and imide (Gazz. chim. ital., 25, II, 515). It does not dissolve in Na₂CO₃ and only slowly in aqueous NaOH, dilute HCl precipitating the amic acid from the solution. Alc. NaOH dissolves the imide with intense violet color which soon disappears, the Na salt of the corresponding acid separating out. HCl turns the alc. solution yellow and H₂O ppts. the amic acid. Heated with concentrate HCl at 150° for 2 hrs. the imide is decompose into p-HOC₆H₄NH₂ and fumaric acid. NaOEt gives a compound C₁₄H₁₇O₄N, reddish brown powder (cf. Gazz. chim. ital., 36, II, 364, 723); sodium salt, reddish violet substance somewhat

soluble in absolute alc. with violet color. sym-Hydroxyphenylmaleinimide could not be obtained but when p-methoxyphenylmaleinamic acid in PhMe is boiled with P4O10, it forms sym-p-methoxyphenylmaleinimide (III), yellow needles, m. 148.5°. Ethyl ether, obtained either like the Me ether above or by subliming the amic acid in CO₂ at 170–80°, yellow needles, m. 134–5°. The crystals are tubular or prismatic, elongated, with extinction perpendicular to the direction of elongation, and show intense canary-yellow pleochroism, dark along the normal direction and that of elongation and very light yellow, almost colorless, along the other. It dissolves at once in aqueous or alc. KOH, HCl precipitating the amic acid m. 178°. With NaOEt, it does not react like the asymmetric imide, becoming faintly red and dissolving slowly to a yellow liquid. p-HOC₆H₄NH₂ fumarate, heated a long time at 200° in CO₂, gives a white form of p-hydroxyphenylfumardiamide, turning brown at about 200° but not m. below 250° and which, when crystallized from AcOH, gives a yellow form. having the same m. p. and all other properties. Dimethyl ether, obtained like the hydroxy compound above or by heating maleic anhydride and p-anisidine at 150°, white powder, m. 215–6°, giving a yellow form when crystallized from aliphatic acids. Diethyl ether, obtained like the Me compound or by heating ethoxyphenylmaleinamic acid in absolute alc. at 150°, white microcryst. powder, m. 223°. The transformation into the yellow form can be effected by simple trituration in a mortar. HCl (30%) or dilute H₂SO₄ decomposes it into fumaric acid and p-HOC₆H₄NH₂. p-Hydroxyphenylcitraconamic acid, from citraconic anhydride and p-HOC₆H₄NH₂ in boiling Me₂CO, yellow acicular prisms, m. 155°; gives no color with FeCl₃. Methyl ether, obtained like the hydroxy compound from p-anisidine, by saponification of the corresponding imide with the calculated amount of alc. KOH, or by the action of mesaconyl chloride on 2 mols. anisidine in petroleum ether, elongated yellow prisms, m. 167°; gives a violet color with FeCl₃. Ethyl ether, yellow needles, m. 162°. Citraconic anhydride and HOC₆H₄NH₂, slowly heated together up to 150°, lose H₂O and form p-hydroxyphenylcitraconimide, dark yellow crystals, m. 170°, soluble in alkaline hydroxides and carbonates, acids precipitating the corresponding amic acid from the solution. Methyl ether, prepared like the hydroxy compound or by dissolving the amic acid in a solvent containing H₂O, yellowish scales, m. 121°, gives a violet color with alc. KOH. Ethyl ether, canary-yellow needles, m. 109°. The hydroxydiamide could not be obtained, but p-methoxyphenylmesacondiamide is formed, together with an anisidine salt, when citraconic anhydride and anisidine are heated at 160–180° in CO₂. It crystallizes from EtOAc in white, gleaming scales, m. 206°, gives no color with FeCl₃. Ethoxy compound, scales, m. 205°. All attempts to obtain amic acids or imides from mesaconic acid were unsuccessful. p-Methoxyphenylmesacondiamide, scales, m. 206°, is formed when the anhydride and anisidine are heated at 160–80°. Ethoxy compound, scales, m. 205°. Mesaconyl chloride and anisidine in petroleum ether at relatively low temperature give methoxyphenylcitraconamic acid and a substance insol. in Na₂CO₃ and crystallizing from alc. in scales or minute needles, m. 235°. Of the 4 possible p-hydroxyphenylitaconamic acids, 3 were obtained: (1) from itaconic anhydride in C₆H₆ and HOC₆H₄NH₂ in Me₂CO, white needles, m. 161–2° to a yellowish brown liquid, gives no color with FeCl₃; (2) from a NaOH solution of the imide and HCl, yellow crystalline powder, m. 118–9°, gives a red color with FeCl₃; (3) by boiling the preceding yellow acid with H₂O, white substance, gives no color with FeCl₃, m. 97–8°. Methyl ethers: (1) white needles, m. 166–7°; (2) yellow crystals, m. 144–5°; (3) white crystals, m. 135–6°. Ethyl ethers: (1) pearly scales, m. 165–6°; (2) yellow precipitate, m. 148–9°; (3) white crystals, m. 134–5°. Which of the possible formulas correspond to these isomers cannot as yet be determined. p-Hydroxyphenylitaconimide, prepared by heating the amic acid in CO₂ slightly above its m. p. until the evolution of H₂O ceased or by heating the anhydride and HOC₆H₄NH₂ at about 130°, yellow needles, m. 104–5°. Methyl ethyl, yellow needles, m. 101–2°, gives an intense reddish violet color with NaOH or NaOEt. Ethyl ether, yellow needles, m. 99–100°. The diamides are obtained by heating

the anhydride with 2 mols. $\text{HOC}_6\text{H}_4\text{NH}_2$ in CO_2 at 200° . p-Hydroxyphenylitacondiamide, light brown laminas, m. $132-3^\circ$. Methyl ether, pearly scales, m. $155-6^\circ$, not attacked by even concentrate boiling KOH. Ethyl ether, pearly scales, m. $173-4^\circ$. In boiling alc. pyrocinchonic anhydride and $\text{HOC}_6\text{H}_4\text{NH}_2$ give p-hydroxyphenylcinchonimide, large canary-yellow crystals, m. 200° ; when ground in a mortar or precipitated from alc. solution by H_2O it is obtained in a white form having about the same m. p. The white form dissolves in Na_2CO_3 with a yellow color which quickly disappears; the yellow form dissolves only on heating. Methyl ether, long, straw-yellow prisms, m. 139° ; crystallizes from Et_2O or Me_2CO or when precipitated from AcOH by H_2O in a white form which m. to a yellow liquid and gives the yellow form on solidifying. The anhydride and anisidine in C_6H_6 at ordinary temperature form p-anisidine p-methoxyphenylpyrocinchonamate, needles, turns yellow at 85° , m. $90-1^\circ$; neutralized with NaOH and then treated with the corresponding amount of H_2SO_4 , the imide is reformed. p-Ethoxyphenylpyrocinchonimide, yellow needles, m. 117° ; precipitated from AcOH by H_2O in a white form. p-Phenetidine p-ethoxyphenylpyrocinchonamate, needles, turns yellow at 80° , m. 94° . The following amic acids were obtained by mixing Me_2CO or C_6H_6 solns. of o-anisidine and various anhydrides. o-Methoxyphenylphthalamic acid, m. $168-9^\circ$, gives a yellow color with FeCl_3 which soon turns to reddish violet. o-Methoxyphenylcitraconamic acid, minute canary-yellow crystals or silky needles, m. $116-7^\circ$. o-Methoxyphenylitaconamic acid, needles, m. $128-9^\circ$. o-Methoxyphenylmaleinamic acid, lemon-yellow amorphous powder, m. $144-5^\circ$. When the anisidine and anhydrides are heated without solvents in CO_2 at $120-30^\circ$, the imides are obtained. o-Methoxyphenylphthalimide, white prisms, m. $155-6^\circ$. o-Methoxyphenylcitraconimide light yellow powder, m. $98-9^\circ$; gives a violet color with alc. KOH. o-Methoxyphenylitaconimide, m. $112-3^\circ$. α -cis-p-Hydroxyphenylcamphoramic acid, turns brown at 155° , m. 165° , does not react with PhNCO ; $[\alpha]_{\text{D}}^{16} 46.36$. α -trans-Acid, obtained by heating a H_2O solution of the K salt of the cis-acid at 120° for 10 hrs., m. 226° , $[\alpha]_{\text{D}}^{16} 13.48$. α -(?)-Acid, obtained from Me_2CO solns. of the anhydride and $\text{HOC}_6\text{H}_4\text{NH}_2$ at ordinary temperature, turns brown at 205° , decompose 220° ; heated in alc. it is transformed into the α -cis-acid; $[\alpha]_{\text{D}}^{16} 52.4$. If the anhydride and $\text{HOC}_6\text{H}_4\text{NH}_2$ are heated at 210° for 5 hrs. another isomeric acid is obtained; m. 185° , $[\alpha]_{\text{D}}^{16} 12.4$. (?)-p-Methoxyphenylcamphoramic acid, from the anhydride and anisidine in C_6H_6 , prisms, m. 198° . α -cis-p-Ethoxyphenylcamphoramic acid, prepared by heating the anhydride and phenetidine in PhMe or in an autoclave without solvent, m. 199° ; $[\alpha]_{\text{D}}^{16} 51.4$. α -trans-Acid, from the K salt of the cis-acid heated in H_2O at 120° , m. 184° , $[\alpha]_{\text{D}}^{25} 2.81$. sym-p-Hydroxyphenylcamphorimide, from camphoryl chloride and $\text{HOC}_6\text{H}_4\text{NH}_2$ in Me_2CO , m. 218° , $[\alpha]_{\text{D}}^{25} 5.49$. Methyl ether, obtained by heating the anhydride and anisidine at 200° , m. 110° . Ethyl ether, needles, m. 114° , $[\alpha]_{\text{D}}^{25} -13.28$. m-Phthalic acid does not react in alc. with $\text{HOC}_6\text{H}_4\text{NH}_2$; with anisidine it gives a small amount of acid p-anisidine m-phthalate, turns brown above 200° . Heated without solvent up to 280° in CO_2 , m-phthalic acid and anisidine give p-methoxyphenyl-m-phthaldiamide, $\text{C}_6\text{H}_4(\text{CONHC}_6\text{H}_4\text{OMe})_2$, needles, m. 268° . p-Methoxyphenyl-p-phthalodiamide, pearly scales, m. $246-8^\circ$. Ethoxy derivative, grayish needles, turns brown at 300° .

L29 ANSWER 10 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2007:217063 USPATFULL [Full-text](#)

TITLE: Dual phase drug release system

INVENTOR(S): PAPISOV, Mikhail I., Winchester, MA, UNITED STATES

	NUMBER	KIND	DATE
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PATENT INFORMATION:	US 2007190018	A1	20070816

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APPLICATION INFO.: US 2004-570466 A1 20040904 (10)
 WO 2004-US29130 20040904
 20070220 PCT 371 date

	NUMBER	DATE	
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PRIORITY INFORMATION:	US 2003-500571P	20030905 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110, US		
NUMBER OF CLAIMS:	43		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	8 Drawing Page(s)		
LINE COUNT:	3561		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to conjugate comprising a carrier substituted with one or more occurrences of a moiety having the structure (I): wherein each occurrence of M is independently a modifier having a molecular weight ≤ 10 kDa; denotes direct or indirect attachment of M to linker L.sup.M; and each occurrence of L.sup.M is independently an optionally substituted succinamide-containing linker, whereby the modifier M is directly or indirectly attached to the succinamide linker through an amide bond, and the carrier is linked directly or indirectly to each occurrence of the succinamide linker through an ester bond. In another aspect, the invention provides compositions comprising the conjugates, methods for their preparation, and methods of use thereof in the treatment of various disorder, including, but not limited to cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 11 OF 37 USPATFULL on STN
 ACCESSION NUMBER: 2005:82267 USPATFULL Full-text
 TITLE: Methods for synthesis of acyloxyalkyl compounds
 INVENTOR(S): Bhat, Laxminarayan, Santa Clara, CA, UNITED STATES
 Gallop, Mark A., Los Altos, CA, UNITED STATES

	NUMBER	KIND	DATE	
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PATENT INFORMATION:	US 2005070715	A1	20050331	
APPLICATION INFO.:	US 2004-893130	A1	20040715	(10)

	NUMBER	DATE	
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PRIORITY INFORMATION:	US 2003-487642P	20030715 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Ann M. Caviani Pease/Sunil K. Singh, Dorsey & Whitney LLP, Intellectual Property Department, Four Embarcadero Center, Suite 3400, San Francisco, CA, 94111-4187		
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1809		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed herein are methods for synthesizing 1-(acyloxy)-alkyl prodrug derivatives of drugs through oxidation of 1-acyl-alkyl derivatives of drugs under anhydrous reaction conditions. The methods typically proceed stereospecifically, in high yield, do not require the use of activated intermediates and/or toxic compounds and are readily amenable to scale-up.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 12 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2005:50740 USPATFULL Full-text
 TITLE: Metal complexes useful in metathesis and other reactions
 INVENTOR(S): Walter, Francis, Gits, BELGIUM
 Clercq, Bob De, Zwalm, BELGIUM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005043541	A1	20050224
APPLICATION INFO.:	US 2004-894308	A1	20040719 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2003-BE8, filed on 22 Jan 2003, UNKNOWN		

	NUMBER	DATE	
PRIORITY INFORMATION:	EP 2002-75250	20020122	<--
	US 2002-349956P	20020201 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110		
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	13 Drawing Page(s)		
LINE COUNT:	4669		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides metal complexes being useful as catalyst components in metathesis reactions and in reactions involving the transfer of an atom or group to an ethylenically or acetylenically unsaturated compound or another reactive substrate and, with respect to a sub-class thereof, for the polymerisation of α -olefins and optionally conjugated dienes, with high activity at moderate temperatures. It also provides methods for obtaining polymers with very narrow molecular weight distribution by means of a living reaction. It also provides methods for making said metal complexes and novel intermediates involved in such methods. It further provides derivatives of said metal complexes which are suitable for covalent bonding to a carrier, the product of such covalent bonding being useful as a supported catalyst for heterogeneous catalytic reactions. It also provides a direct one-step synthesis of pyrrole, furan and thiophene compounds from diallyl compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 13 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2004:292910 USPATFULL Full-text
 TITLE: Adhesives composition, adhesive film, and semiconductor apparatus using the same
 INVENTOR(S): Misumi, Sadahito, Osaka, JAPAN
 Matsumura, Takeshi, Osaka, JAPAN
 Mizutani, Masaki, Osaka, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004230000	A1	20041118
APPLICATION INFO.:	US 2003-722175	A1	20031125 (10)

	NUMBER	DATE	
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PRIORITY INFORMATION:	JP 2002-350144	20020212	<--
	JP 2003-152683	20030529	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, IRVINE, CA, 92614		
NUMBER OF CLAIMS:	19		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1280		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An adhesive composition is provided that may give stable fixing strength without variation in a coated amount, and may form an adhesive film having excellent storage stability in fixing of semiconductor chips with electrode members. Moreover, an adhesive film (adhesive film for die bonding) obtained from the composition concerned is provided. An adhesive composition is used that is characterized by including epoxy resins (A), phenol resins (B), synthetic rubbers (C), and microcapsules (D) including hardening accelerator that has a core/shell structure in which a core part including hardening accelerator is covered by a shell part formed with thermoplastic resins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 14 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2004:255392 USPATFULL Full-text
 TITLE: Insulating-film forming material and insulating film
 using the same
 INVENTOR(S): Adegawa, Yutaka, Shizuoka, JAPAN
 PATENT ASSIGNEE(S): FUJI PHOTO FILM CO., LTD. (non-U.S. corporation)

	NUMBER	KIND	DATE	
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PATENT INFORMATION:	US 2004198922	A1	20041007	
	US 7144970	B2	20061205	
APPLICATION INFO.:	US 2004-805204	A1	20040322	(10)

	NUMBER	DATE	
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PRIORITY INFORMATION:	JP 2003-91226	20030328	<--
	JP 2003-95604	20030331	<--
	JP 2004-77740	20040318	
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., SUITE 800, WASHINGTON, DC, 20037		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1185		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An insulating-film forming material comprising a resin (A) that has a structure represented by formula (I):

.brket open-st.O--Y.sub.1--O--Ar.sub.1.brket close-st..sub.n.brket open-
 st.O--Y.sub.2--O--Ar.sub.2.brket close-st..sub.m (I)

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wherein Y.sub.1, Y.sub.2, Ar.sub.1 and Ar.sub.2 are the same or different; each of Y.sub.1, Y.sub.2, Ar.sub.1 and Ar.sub.2 represents an aromatic ring-containing divalent organic group; at least one of Y.sub.1 and Y.sub.2 is a divalent aromatic polycyclic group having a specific structure; m and n each indicates a molar percentage of the repeating units; and m falls between 0 and 100 with (m+n)=100.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 15 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2004:240401 USPATFULL Full-text
TITLE: Surface-treating agent comprising inorganic/organic composite material
INVENTOR(S): Satoh, Kazuyuki, Osaka, JAPAN
Sakai, Mihoko, Osaka, JAPAN
Araki, Takayuki, Osaka, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004186216	A1	20040923
	US 7125926	B2	20061024
APPLICATION INFO.:	US 2004-472377	A1	20040408 (10)
	WO 2002-JP2646		20020320

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2001-80352	20010321 <--
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., SUITE 800, WASHINGTON, DC, 20037	
NUMBER OF CLAIMS:	22	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	4 Drawing Page(s)	
LINE COUNT:	1870	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A surface treatment agent, which contains:

(A) a hydrolyzable metal alkoxide or a hydrolyzate thereof,

(B) a fluorocompound containing a perfluoroalkyl group and a functional group reactive with the hydrolyzable metal alkoxide (A), and

(C) an adhesion improvement agent,

can provide a film having transparency and durability while maintaining excellent soil releasability and low refractive index.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 16 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2004:76280 USPATFULL Full-text
TITLE: Raman-active taggants and thier recognition
INVENTOR(S): Shchegolikhin, Alexander Nikitovich, Moscow, RUSSIAN

FEDERATION

Lazareva, Olga Leonidovna, Moscow, RUSSIAN FEDERATION
 Mel'nikov, Valery Pavlovich, Moscow, RUSSIAN FEDERATION
 Ozeretski, Vassili Yu, Moscow, RUSSIAN FEDERATION
 Small, Lyle David, Peyton, CO, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004058058	A1	20040325
APPLICATION INFO.:	US 2003-454110	A1	20030604 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-833218, filed on 11 Apr 2001, GRANTED, Pat. No. US 6610351		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-196876P	20000412 (60) <--
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Law Office of Dale B. Halling, LLC, Suite 311, 24 South Weber Street, Colorado Springs, CO, 80903	
NUMBER OF CLAIMS:	43	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	36 Drawing Page(s)	
LINE COUNT:	6383	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

AB An organic or organoelement, linear or branched, monomeric or polymeric composition of matter having a Raman-active component in the form of particles. The particles having a maximum dimension of 50 μm . The Raman-active compound is applied to a substrate. When the Raman-active compound is exposed to a laser light wavelength which is bathochromically well beyond a spectral region of maximum absorbance of said Raman-active compound, Raman scattering can be detected.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 17 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2004:64489 USPATFULL Full-text
 TITLE: Templated molecules and methods for using such molecules

INVENTOR(S): Pedersen, Henrik, Bagsvaerd, DENMARK
 Gouilaev, Alex Haahr, Vesko Sjaelland, DENMARK
 Franch, Thomas, Odense C, DENMARK
 Sams, Christian Klarner, Frederiksberg C, DENMARK
 Olsen, Eva Kampmann, Herlev, DENMARK
 Slok, Frank Abilgaard, Kobenhavn N, DENMARK
 Husemoen, Gitte Nystrup, Kobenhavn N, DENMARK
 Felding, Jakob, Charlottenlund, DENMARK
 Hyldtoft, Lene, Virum, DENMARK
 Norregaard-Madsen, Mads, Birkerod, DENMARK
 Godskesen, Michael Anders, Vedbaek, DENMARK
 Glad, Sanne Schroder, Ballerup, DENMARK
 Thisted, Thomas, Frederikssund, DENMARK
 Freskgard, Per-Ola, Vellinge, SWEDEN
 Holtmann, Anette, Ballerup, DENMARK
 PATENT ASSIGNEE(S): Nuevolution A/S, Copenhagen, DENMARK (non-U.S. corporation)

NUMBER	KIND	DATE
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10/582,370

PATENT INFORMATION: US 2004049008 A1 20040311
APPLICATION INFO.: US 2002-175539 A1 20020620 (10)

	NUMBER	DATE	
PRIORITY INFORMATION:	DK 2001-962	20010620	<--
	US 2001-299443P	20010621 (60)	<--
	US 2002-364056P	20020315 (60)	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	BROWDY AND NEIMARK, P.L.L.C., 624 NINTH STREET, NW, SUITE 300, WASHINGTON, DC, 20001-5303		
NUMBER OF CLAIMS:	316		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	100 Drawing Page(s)		
LINE COUNT:	11215		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for synthesising templated molecules. In one aspect of the invention, the templated molecules are linked to the template which templated the synthesis thereof. The intion allows the generation of libraries which can be screened for e.g. therapeutic activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 18 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2003:312640 USPATFULL Full-text
TITLE: Conjugate addition reactions for the controlled
delivery of pharmaceutical active compounds
INVENTOR(S): Hubbell, Jeffrey A, Zumikon, SWITZERLAND
Elbert, Donald, University City, MO, UNITED STATES
Schoenmakers, Ronald, Zurich, SWITZERLAND

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003220245	A1	20031127	<--
APPLICATION INFO.:	US 2003-297229	A1	20030324 (10)	
	WO 2001-US18101		20010604	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	CLARK & ELBING LLP, 101 FEDERAL STREET, BOSTON, MA, 02110			
NUMBER OF CLAIMS:	52			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	27 Drawing Page(s)			
LINE COUNT:	5995			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention features polymeric biomaterials formed by nucleophilic addition reactions to conjugated unsaturated groups. These biomaterials may be used for medical treatments.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 19 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2003:176092 USPATFULL Full-text
TITLE: Phase change inks containing borate esters
INVENTOR(S): Smith, Thomas W., Penfield, NY, United States
Ahuja, Suresh K., Webster, NY, United States

10/582,370

PATENT ASSIGNEE(S): Xerox Corporation, Stamford, CT, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6585816	B1	20030701	<--
APPLICATION INFO.:	US 2001-40464		20011109	(10)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Bell, Mark L.			
ASSISTANT EXAMINER:	Faison, Veronica F.			
LEGAL REPRESENTATIVE:	Byorick, Judith L.			
NUMBER OF CLAIMS:	20			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)			
LINE COUNT:	1682			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a phase change ink composition comprising a colorant and an ink vehicle, said ink being a solid at temperatures less than about 50° C., wherein the ink vehicle comprises a borate ester.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 20 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2002:181498 USPATFULL Full-text
 TITLE: Thermal switchable composition and imaging member containing oxonol IR dye and methods of imaging and printing
 INVENTOR(S): DoMinh, Thap, Webster, NY, United States
 Zheng, Shiyong, Rochester, NY, United States
 Williams, Kevin W., Rochester, NY, United States
 PATENT ASSIGNEE(S): Eastman Kodak Company, Rochester, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6423469	B1	20020723	<--
APPLICATION INFO.:	US 1999-444695		19991122	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Baxter, Janet			
ASSISTANT EXAMINER:	Gilmore, Barbara			
LEGAL REPRESENTATIVE:	Tucker, J. Lanny			
NUMBER OF CLAIMS:	28			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)			
LINE COUNT:	1718			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An imaging member, such as a negative-working printing plate or on-press cylinder, can be prepared with a hydrophilic imaging layer comprised of a heat-sensitive hydrophilic polymer having ionic moieties and an infrared radiation sensitive oxonol dye that has a $\lambda_{sub.max}$ of greater than 700 nm. The heat-sensitive polymer and IR dye can be formulated in water or water-miscible solvents to provide highly thermal sensitive imaging compositions. In the imaging member, the polymer reacts to provide increased hydrophobicity in areas exposed to energy that provides or generates heat. For example, heat can be supplied by laser irradiation in the IR region of the electromagnetic spectrum. The heat-sensitive polymer is considered

"switchable" in response to heat, and provides a lithographic image without wet processing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 21 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2002:129637 USPATFULL Full-text
 TITLE: Prepeg and carbon fiber reinforced composite materials
 INVENTOR(S): Fujino, Mutsuko, Ehime, JAPAN
 Noda, Shunsaku, Ehime, JAPAN
 Oosedo, Hiroki, Ehime, JAPAN
 Okita, Hideki, Ehime, JAPAN
 PATENT ASSIGNEE(S): Toray Industries Inc., Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
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PATENT INFORMATION:	US 6399199	B1	20020604	<--
APPLICATION INFO.:	US 2000-536290		20000327	(9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-522414, filed on 9 Mar 2000 Continuation-in-part of Ser. No. US 1999-472846, filed on 28 Dec 1999 Continuation-in-part of Ser. No. US 319902			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Dixon, Merrick			
LEGAL REPRESENTATIVE:	Morrison & Foerster LLP			
NUMBER OF CLAIMS:	18			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)			
LINE COUNT:	1965			

AB The invention provides a prepreg, formed by impregnating carbon fiber with an epoxy resin composition comprising an epoxy resin (A) and a curing agent (B) wherein the matrix resin content W_r (wt %) of the prepreg, the 0° tensile modulus E (GPa) of the carbon fiber, and the in-plane shear strength of S (MPa) of the carbon fiber reinforced composition material obtained by heating and curing the prepreg satisfy the following formulae (i) and (ii):

$$S \geq 205 + \log(E) + 610 \quad (i)$$

$$15 \leq W_r \leq 40 \quad (ii)$$

The prepreg has a high in-plane shear strength, a high mode I interlayer fracture toughness $G_{sub}IC$, an excellent CFRP tube in torsional strength, a high radial compressive strength and a high impact strength and a light weight.

L29 ANSWER 22 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2002:43125 USPATFULL Full-text
 TITLE: Raman-active taggants and their recognition
 INVENTOR(S): Shchegolikhin, Alexander Nikitovich, Moscow, RUSSIAN FEDERATION
 Lazareva, Olga Leonidovna, Moscow, RUSSIAN FEDERATION

10/582,370

Melnikov, Valery Pavlovich, Moscow, RUSSIAN FEDERATION
Ozeretski, Vassili Yu, Moscow, RUSSIAN FEDERATION
Small, Lyle David, Peyton, CO, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002025490	A1	20020228	<--
	US 6610351	B2	20030826	
APPLICATION INFO.:	US 2001-833218	A1	20010411	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-196876P	20000412	(60) <--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Law Office of Dale B. Halling, LLC, Suite 311, 24 S. Weber Street, Colorado Springs, CO, 80903		
NUMBER OF CLAIMS:	43		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	33 Drawing Page(s)		
LINE COUNT:	6399		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An organic or organoelement, linear or branched, monomeric or polymeric composition of matter having a Raman-active component in the form of particles. The particles having a maximum dimension of 50 μ m. The Raman-active compound is applied to a substrate. When the Raman-active compound is exposed to a laser light wavelength which is bathochromically well beyond a spectral region of maximum absorbance of said Raman-active compound, Raman scattering can be detected.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 23 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2001:111956 USPATFULL Full-text
TITLE: Oxygen plasma resistant polymer for electrical devices
INVENTOR(S): Ryang, Hong-Son, Camarillo, CA, United States
Chung, Young Jin, Calabasas, CA, United States
Snyder, II, Joseph T., Chesterland, OH, United States
Sung, An-Min Jason, Morris Plains, NJ, United States
PATENT ASSIGNEE(S): Reliance Electric Technologies, LLC, Thousand Oaks, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6261687	B1	20010717	<--
APPLICATION INFO.:	US 2000-645942		20000825	(9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-23171, filed on 13 Feb 1998, now patented, Pat. No. US 6159600 Continuation-in-part of Ser. No. US 1997-801832, filed on 14 Feb 1997, now patented, Pat. No. US 5780525			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Krynski, William			
ASSISTANT EXAMINER:	Gray, J. M.			
LEGAL REPRESENTATIVE:	Turocy, Gregory, Gerasimow, A. M.			
NUMBER OF CLAIMS:	19			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)			
LINE COUNT:	1729			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In one embodiment, the present invention relates to a substrate for an electrical device including a coating, wherein the coating comprises an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In another embodiment, the present invention relates to a component for an electrical device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In yet another embodiment, the present invention relates to a microelectronic device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 24 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2001:63357 USPATFULL Full-text
 TITLE: Oxygen plasma resistant polymer for electrical devices
 INVENTOR(S): Ryang, Hong-Son, Camarillo, CA, United States
 Chung, Young Jin, Calabasas, CA, United States
 Snyder, II, Joseph T., Chesterland, OH, United States
 Sung, An-Min Jason, Morris Plains, NJ, United States
 PATENT ASSIGNEE(S): Reliance Electric Technologies, LLC, Thousand Oaks, CA,
 United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6224979	B1	20010501	<--
APPLICATION INFO.:	US 2000-664235		20000918	(9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-23171, filed on 13 Feb 1998, now patented, Pat. No. US 6159600			
	Continuation-in-part of Ser. No. US 1997-801832, filed on 14 Feb 1997, now patented, Pat. No. US 5780525			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Krynski, William			
ASSISTANT EXAMINER:	Gray, J. M.			
LEGAL REPRESENTATIVE:	Turocy, Gregory, Gerasimow, A. M.			
NUMBER OF CLAIMS:	20			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)			
LINE COUNT:	1743			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In one embodiment, the present invention relates to a substrate for an electrical device including a coating, wherein the coating comprises an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In another embodiment, the present invention relates to a component for an electrical device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In yet another embodiment, the present invention relates to a microelectronic device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 25 OF 37 USPATFULL on STN

ACCESSION NUMBER: 2000:167648 USPATFULL Full-text
 TITLE: Oxygen plasma resistant polymer for electrical devices
 INVENTOR(S): Ryang, Hong-Son, Camarillo, CA, United States
 Chung, Young Jin, Calabasas, CA, United States
 Snyder, II, Joseph T., Chesterland, OH, United States
 Sung, An-Min Jason, Morris Plains, NJ, United States
 PATENT ASSIGNEE(S): Reliance Electric Technologies, LLC, Thousand Oaks, CA,
 United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6159600		20001212 <--
APPLICATION INFO.:	US 1998-23171		19980213 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-801832, filed on 14 Feb 1997, now patented, Pat. No. US 5780525		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Krynski, William		
ASSISTANT EXAMINER:	Gray, J.		
LEGAL REPRESENTATIVE:	Turocy, Gregory, Horn, John J., Walbrun, William R.		
NUMBER OF CLAIMS:	8		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	1670		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In one embodiment, the present invention relates to a substrate for an electrical device including a coating, wherein the coating comprises an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In another embodiment, the present invention relates to a component for an electrical device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In yet another embodiment, the present invention relates to a microelectronic device comprising an oxygen plasma resistant polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 26 OF 37 USPATFULL on STN

ACCESSION NUMBER: 1999:121509 USPATFULL Full-text
 TITLE: Polymers made with metal oxide sols
 INVENTOR(S): Ryang, Hong-Son, Camirillo, CA, United States
 Chung, Young Jin, Calabasas, CA, United States
 Snyder, II, Joseph T., Chesterland, OH, United States
 Sung, An-Min Jason, Morris Plains, NY, United States
 PATENT ASSIGNEE(S): Reliance Electric Industrial Co., Cleveland, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5962608		19991005 <--
APPLICATION INFO.:	US 1998-23175		19980213 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-801832, filed on 14 Feb 1997, now patented, Pat. No. US 5780525

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: McCamish, Marion

ASSISTANT EXAMINER: Juska, Cheryl

LEGAL REPRESENTATIVE: Trurocy, Gregory, Miller, John M., Horn, John J.

NUMBER OF CLAIMS: 22

EXEMPLARY CLAIM: 15

LINE COUNT: 2286

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In one embodiment, the present invention relates to a polymer prepared from a mixture containing a polymerization material and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor. In another embodiment, the present invention relates to a process for making a polymer involving contacting a polymerization material with a metal oxide sol comprising a liquid and a polycondensation product of a partially hydrolyzed chelated metal oxide precursor to form a mixture and at least one of polymerizing and curing the mixture of the polymerization material and the polycondensation product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 27 OF 37 USPATFULL on STN

ACCESSION NUMBER: 97:40871 USPATFULL Full-text

TITLE: Direct synthesis by living cationic polymerization of nitrogen-containing polymers

INVENTOR(S): Cheradame, Herve M., Grignan, France
Chen, Frank J., Edison, NJ, United States
Stanat, Jon E. R., Westfield, NJ, United States
Nguyen, Hung A., La Kremlin Bicetre, France
Tabar, Behrooz R., Paris, France

PATENT ASSIGNEE(S): Exxon Chemical Patents Inc, Linden, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
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PATENT INFORMATION:	US 5629394		19970513	<--
APPLICATION INFO.:	US 1995-474043		19950607	(8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1992-992511, filed on 17 Dec 1992, now patented, Pat. No. US 5444135			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Schofer, Joseph L.			
ASSISTANT EXAMINER:	Cheng, Wu C.			
LEGAL REPRESENTATIVE:	Cohen, Harvey L.			
NUMBER OF CLAIMS:	20			
EXEMPLARY CLAIM:	1			
LINE COUNT:	4987			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for the direct synthesis by living cationic polymerization of novel polymeric materials functionalized with desirable nitrogen-containing functional groups such as terminal azido, cyano, carbonylamino, cyanato, thiocyanato or thiocarbonylamino groups. Polymerization and functionalization occur in a substantially simultaneous manner. All necessary reactants for the functionalization are present when polymerization is initiated. The nitrogen-containing functional group is provided as a part of a molecule having a release moiety which is preferably

resonance stabilized or a tertiary alkyl type and which acts to aid the nitrogen-containing species in functioning as a leaving group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 28 OF 37 USPATFULL on STN

ACCESSION NUMBER: 95:76044 USPATFULL Full-text
 TITLE: Direct synthesis by living cationic polymerization of nitrogen-containing polymers
 INVENTOR(S): Cheradame, Herve M., Grignan, France
 Chen, Frank J., Edison, NJ, United States
 Stanat, Jon E. R., Westfield, NJ, United States
 Nguyen, Hung A., Le Kremlin Bicetre, France
 Tabar, Behrooz R., Paris, France
 PATENT ASSIGNEE(S): Exxon Chemical Patents Inc., Linden, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5444135		19950822	<--
APPLICATION INFO.:	US 1992-992511		19921217	(7)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Schofer, Joseph L.			
ASSISTANT EXAMINER:	Cheng, Wu C.			
LEGAL REPRESENTATIVE:	Walton, K. R., Cohen, H. L.			
NUMBER OF CLAIMS:	24			
EXEMPLARY CLAIM:	1			
LINE COUNT:	4989			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for the direct synthesis by living cationic polymerization of novel polymeric materials functionalized with desirable nitrogen-containing functional groups such as terminal azido, cyano, carbonylamino, cyanato, thiocyanato or thiocarbonylamino groups. Polymerization and functionalization occur in a substantially simultaneous manner. All necessary reactants for the functionalization are present when polymerization is initiated. The nitrogen-containing functional group is provided as a part of a molecule having a release moiety which is preferably resonance stabilized or a tertiary alkyl type and which acts to aid the nitrogen-containing species in functioning as a leaving group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 29 OF 37 USPATFULL on STN

ACCESSION NUMBER: 95:58193 USPATFULL Full-text
 TITLE: Thermoplastic resin compositions comprising polyphenylene ether, polyolefins and dinitrodiamines
 INVENTOR(S): Abe, Hiroomi, Chiba, Japan
 Fujii, Takeshi, Chiba, Japan
 Yamamoto, Masashi, Chiba, Japan
 Yachigo, Shinichi, Osaka, Japan
 Nagasaki, Hideo, Osaka, Japan
 Inui, Naoki, Nara, Japan
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Osaka, Japan (non-U.S. corporation)

NUMBER	KIND	DATE
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10/582,370

PATENT INFORMATION: US 5428091 19950627 <--
 APPLICATION INFO.: US 1993-171622 19931222 (8)
 DISCLAIMER DATE: 20110405
 RELATED APPLN. INFO.: Division of Ser. No. US 1991-667408, filed on 8 Apr
 1991, now patented, Pat. No. US 5300568
 DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Hamilton, III, Thomas
 LEGAL REPRESENTATIVE: Cushman Darby & Cushman
 NUMBER OF CLAIMS: 4
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
 LINE COUNT: 2340

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A thermoplastic resin composition which comprises 100 parts by weight of a composition comprising 95-5 % by weight of at least one polyolefinresin (A) selected from homopolymers of ethylene or α -olefin or copolymers thereof and these homopolymers or copolymers modified with a polyfunctional compound (E) and/or an unsaturated monomer (L) and 5-95 % by weight of at least one polyphenylene-ether-resin (B) selected from polyphenylene ether, modified polyphenylene ether with the above (E) and/or (L) and a composition comprising the polyphenylene or modified polyphenylene ether and an aromatic vinyl polymer resin (M) and 0.001-10 parts by weight of a dinitrodiamine (D) of the following formula (I). ##STR1## (wherein X represents a divalent chain aliphatic group, a cyclic aliphatic group or an aromatic group which may contain a halogen or an oxygen atom, R.sup.1 represents a hydrogen atom, a chain aliphatic group, a cyclic aliphatic group or an aromatic group and when both of X and R.sup.1 are chain aliphatic groups, the nitrogen atoms may further bond each other to form a ring through X and R.sup.1 ; R.sup.2 and R.sup.3 are independently a hydrogen atom or an alkyl group of 1-12 carbon atoms and R.sup.2 and R.sup.3 may bond to form a ring).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 30 OF 37 USPATFULL on STN

ACCESSION NUMBER: 94:28813 USPATFULL Full-text
 TITLE: Thermoplastic resin composition
 INVENTOR(S): Abe, Hiroomi, Chiba, Japan
 Fujii, Takeshi, Chiba, Japan
 Yamamoto, Masashi, Chiba, Japan
 Yachigo, Shinichi, Osaka, Japan
 Nagasaki, Hideo, Osaka, Japan
 Inui, Naoki, Nara, Japan
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Osaka, Japan
 (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5300568		19940405	<--
	WO 9119762		19911226	<--
APPLICATION INFO.:	US 1991-667408		19910408	(7)
	WO 1990-JP759		19900611	
			19910408	PCT 371 date
			19910408	PCT 102(e) date
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Seidleck, James J.			
ASSISTANT EXAMINER:	Hamilton, III, Thomas			
LEGAL REPRESENTATIVE:	Cushman, Darby & Cushman			

NUMBER OF CLAIMS: 17
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
 LINE COUNT: 2286

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A thermoplastic resin composition which comprises 100 parts by weight of a composition comprising 95-5% by weight of at least one polyolefin-resin (A) selected from homopolymers of ethylene or α -olefin or copolymers thereof and these homopolymers or copolymers modified with a polyfunctional compound (E) and/or an unsaturated monomer (L) and 5-95% by weight of at least one polyphenylene-ether-resin (B) selected from polyphenylene ether, modified polyphenylene ether with the above (E) and/or (L) and a composition comprising the polyphenylene or modified polyphenylene ether and an aromatic vinyl polymer resin (M) and 0.001-10 parts by weight of a dinitrodiamine (D) of the following formula (I). ##STR1## (wherein X represents a divalent chain aliphatic group, a cyclic aliphatic group or an aromatic group which may contain a halogen or an oxygen atom, R.sup.1 represents a hydrogen atom, a chain aliphatic group, a cyclic aliphatic group or an aromatic group and when both of X and R.sup.1 are chain aliphatic groups, the nitrogen atoms may further bond each other to form a ring through X and R.sup.1 ; R.sup.2 and R.sup.3 are independently a hydrogen atom or an alkyl group of 1-12 carbon atoms and R.sup.2 and R.sup.3 may bond to form a ring).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 31 OF 37 USPATFULL on STN

ACCESSION NUMBER: 92:17123 USPATFULL Full-text
 TITLE: Staurosporine derivatives substituted at methylamino nitrogen
 INVENTOR(S): Caravatti, Giorgio, Allschwil, Switzerland
 Fredenhagen, Andreas, Basel, Switzerland
 PATENT ASSIGNEE(S): Ciba-Geigy Corporation, Ardsley, NY, United States
 (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5093330		19920303	<--
APPLICATION INFO.:	US 1991-673857		19910321 (7)	
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1989-384191, filed on 21 Jul 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-202855, filed on 6 Jun 1988, now abandoned			

	NUMBER	DATE	
PRIORITY INFORMATION:	CH 1987-2244	19870615	<--
	CH 1988-1440	19880419	<--
	CH 1988-4511	19881206	<--

DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Berch, Mark L.
 LEGAL REPRESENTATIVE: Villamizar, JoAnn
 NUMBER OF CLAIMS: 10
 EXEMPLARY CLAIM: 1
 LINE COUNT: 1989

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB N-substituted derivatives of staurosporine of the general formula

[Stau]--N(CH.sub.3)--R

(I)

in which [Stau] represents a residue of the partial formula ##STR1## and R represents a hydrocarbyl radical R^{sup.o} or an acyl radical Ac, which radicals preferably have a maximum of 30 carbon atoms, and salts of compounds of the formula I having salt-forming properties, are distinguished as selective inhibitors of proteinkinase C. They are manufactured by conventional alkylation or acylation, respectively, of staurosporine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 32 OF 37 USPATFULL on STN

ACCESSION NUMBER: 83:12868 USPATFULL Full-text
 TITLE: Antibacterial agents and metal containing azetidinone intermediates therefore
 INVENTOR(S): Menard, Marcel, Aberdeen, Canada
 Martel, Alain, Monette, Canada
 PATENT ASSIGNEE(S): Bristol Myers Company, New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4378314		19830329 <--
APPLICATION INFO.:	US 1980-200362		19801024 (6)
RELATED APPLN. INFO.:	Division of Ser. No. US 1979-77888, filed on 21 Sep 1979, now patented, Pat. No. US 4272437 which is a continuation-in-part of Ser. No. US 1978-968663, filed on 18 Dec 1978, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Berch, Mark L.		
LEGAL REPRESENTATIVE:	Morse, David M.		
NUMBER OF CLAIMS:	4		
EXEMPLARY CLAIM:	1		
LINE COUNT:	13063		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to 2-substituted and 2,6-disubstituted penem compounds of the formula ##STR1## wherein Y is hydrogen, halo or certain organic substituents and X represents certain organic substituents. Also included in the invention are pharmaceutically acceptable salts of the above compounds and derivatives of the above compounds in which the carboxyl group at the 3-position is protected as by an easily removable ester protecting group. The compounds of the present invention are potent antibacterial agents or are of use as intermediates in the preparation of such agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 33 OF 37 USPATFULL on STN

ACCESSION NUMBER: 81:31717 USPATFULL Full-text
 TITLE: Antibacterial agents, and 4-thio azetidinone intermediates
 INVENTOR(S): Menard, Marcel, Candiac, Canada
 Martel, Alain, Delson, Canada
 PATENT ASSIGNEE(S): Bristol-Myers Company, New York, NY, United States (U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION: US 4272437 19810609 <--
 APPLICATION INFO.: US 1979-77888 19790921 (6)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1978-968663, filed
 on 18 Dec 1978, now abandoned

DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Berch, Mark L.
 LEGAL REPRESENTATIVE: Morse, David M.
 NUMBER OF CLAIMS: 5
 EXEMPLARY CLAIM: 1
 LINE COUNT: 13088

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to 2-substituted and 2,6-disubstituted penem compounds of the formula ##STR1## wherein Y is hydrogen, halo or certain organic substituents and X represents certain organic substituents. Also included in the invention are pharmaceutically acceptable salts of the above compounds and derivatives of the above compounds in which the carboxyl group at the 3-position is protected as by an easily removable ester protecting group. The compounds of the present invention are potent antibacterial agents or are of use as intermediates in the preparation of such agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 34 OF 37 USPATFULL on STN

ACCESSION NUMBER: 78:59965 USPATFULL Full-text
 TITLE: Emulsion polymerization of ethylenically
 unsaturated monomers in hydroxy-terminated
 organic compounds

INVENTOR(S): Ramlow, Gerhard Gustav, Grosse Ile, MI, United States
 Pizzini, Louis Celeste, Trenton, MI, United States
 Patton, Jr., John Thomas, Wyandotte, MI, United States
 Murphy, John Richard, Trenton, MI, United States
 Davis, John Eugene, Woodhaven, MI, United States

PATENT ASSIGNEE(S): BASF Wyandotte Corporation, Wyandotte, MI, United
 States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4122056		19781024	<--
APPLICATION INFO.:	US 1978-880691		19780223	(5)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1976-722043, filed on 10 Sep 1976, now abandoned			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Rzucidlo, Eugene C.			
LEGAL REPRESENTATIVE:	Michaels, Joseph D., Swick, Bernhard R., Dunn, Robert E.			
NUMBER OF CLAIMS:	18			
EXEMPLARY CLAIM:	1			
LINE COUNT:	637			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Finely-divided dispersed solids are prepared by the emulsion polymerization in the presence of a free radical catalyst of a major amount of an ethylenically unsaturated monomer or mixture of monomers and a minor amount of a hydroxy-terminated organic compound having from one to eight hydroxyl groups, an oxyethylene content of from about 15 to 80 weight percent, a hydroxyl equivalent weight of from 250 to 10,000 and containing a polymerizable carbon-to-carbon double bond. The resulting polymeric solids

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are particularly useful in the preparation of reinforced polymer compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 35 OF 37 USPATFULL on STN

ACCESSION NUMBER: 78:15472 USPATFULL Full-text

TITLE: Stabilization of polyolefins against degradative deterioration as a result of exposure to light and air at elevated temperatures

INVENTOR(S): Kauder, Otto S., New York, NY, United States
Brecker, Lawrence R., Brooklyn, NY, United States

PATENT ASSIGNEE(S): Argus Chemical Corporation, Brooklyn, NY, United States
(U.S. corporation)

	NUMBER	KIND	DATE	
	-----	-----	-----	
PATENT INFORMATION:	US 4080364		19780321	<--
APPLICATION INFO.:	US 1976-727083		19760927	(5)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Hoke, V.P.			
NUMBER OF CLAIMS:	33			
EXEMPLARY CLAIM:	1,23			
LINE COUNT:	1860			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Stabilizer mixtures that are capable of enhancing the resistance of polyolefins to degradation as a result of exposure to light and air, particularly at elevated temperatures, are obtained by reacting an α -olefin with an ester of a mercaptocarboxylic acid and a polyhydric alcohol, forming a reaction product of unknown structure containing thioether groups and carboxylic acid ester groups.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 36 OF 37 USPATFULL on STN

ACCESSION NUMBER: 76:827 USPATFULL Full-text

TITLE: Finely-divided polymeric solids having improved physical properties

INVENTOR(S): Ramlow, Gerhard G., East Windsor, NJ, United States
Pizzini, Louis C., Trenton, MI, United States
Patton, Jr., John T., Wyandotte, MI, United States
Murphy, John R., Trenton, MI, United States

PATENT ASSIGNEE(S): BASF Wyandotte Corporation, Wyandotte, MI, United States
(U.S. corporation)

	NUMBER	KIND	DATE	
	-----	-----	-----	
PATENT INFORMATION:	US 3931092		19760106	<--
APPLICATION INFO.:	US 1974-465234		19740429	(5)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Kight, III, John			
LEGAL REPRESENTATIVE:	Michaels, Joseph D., Swick, Bernhard R., Dunn, Robert E.			
NUMBER OF CLAIMS:	21			
EXEMPLARY CLAIM:	1			
LINE COUNT:	807			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Finely-divided dispersed solids are prepared by polymerizing in the presence of a free radical catalyst and an organic solvent a major amount of an ethylenically unsaturated monomer or mixture of monomers and a minor amount of a hydroxy-terminated organic compound having from one to eight hydroxyl groups, an equivalent weight of from 500 to 10,000 and containing a polymerizable carbon-to-carbon double bond. The resulting polymeric solids are particularly useful in the preparation of reinforced polymer compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L29 ANSWER 37 OF 37 USPATFULL on STN

ACCESSION NUMBER: 75:4018 USPATFULL Full-text
 TITLE: CHEMICALLY JOINED, PHASE SEPARATED GRAFT COPOLYMERS
 HAVING DIBLOCK POLYMERIC SIDECAINS
 INVENTOR(S): Milkovich, Ralph, Naperville, IL, United States
 Chiang, Mutong T., Palos Heights, IL, United States
 Schulz, Gerald O., Downers Grove, IL, United States
 PATENT ASSIGNEE(S): CPC International Inc., Englewood Cliffs, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 3862267		19750121 <--
APPLICATION INFO.:	US 1973-347040		19730402 (5)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1972-282099, filed on 21 Aug 1972, now patented, Pat. No. US 3786116, issued on 15 Jan 1974 which is a continuation-in-part of Ser. No. US 1972-244205, filed on 14 Apr 1972, now patented, Pat. No. US 3832423 which is a continuation-in-part of Ser. No. US 1971-117733, filed on 22 Feb 1971, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Wong, Jr., Harry		
ASSISTANT EXAMINER:	Holler, A.		
LEGAL REPRESENTATIVE:	Halluin, Albert P.		
NUMBER OF CLAIMS:	39		
EXEMPLARY CLAIM:	1		
LINE COUNT:	3724		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to chemically joined, phase separated graft copolymers comprised of copolymeric backbones containing a plurality of uninterrupted repeating units of a backbone polymer and at least one integrally copolymerized moiety per backbone polymer chain having chemically bonded thereto a substantially linear polymer which forms a copolymerized sidechain to the backbone, wherein each of the polymeric sidechains has substantially the same molecular weight and each polymeric sidechain is chemically bonded to only one backbone polymer, and said polymeric sidechains are further characterized as having at least two polymeric segments in the form of a diblock or triblock polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

RESULTS FROM MEDLINE, BIOSIS, EMBASE, WPIDS, JAPIO, AGRICOLA, CABA, CROPB,
CROPR, CROPU, FSTA, FROSTI, AND LIFESCI

=> => d que stat 130

```

L7          1 SEA FILE=REGISTRY ABB=ON  CARBON/CN
L8          95808 SEA FILE=HCAPLUS ABB=ON  ?ETHER?(4A)?PREP?
L9          11236 SEA FILE=HCAPLUS ABB=ON  L8 AND (?DIOL? OR ?LACTONE?)
L21         20637 SEA FILE=USPATFULL ABB=ON  L9 AND (?VAPOR? OR ?CATALYST? OR
(PRE(W)?REACT? OR ?PREREACT?))
L22         17471 SEA FILE=USPATFULL ABB=ON  L21 AND (?CONTACT?(W)?AREA? OR
?HYDROGEN?)
L23         1910 SEA FILE=USPATFULL ABB=ON  L22 AND (L7 OR ?CARBON?) (4A)?DOUBLE?
(W)?BOND?
L24         109 SEA FILE=USPATFULL ABB=ON  L23 AND ?LIQUID?(W)?PHASE?
L25         74 SEA FILE=USPATFULL ABB=ON  L24 AND ?ORGANIC?(4A)?SOLV?
L26         63 SEA FILE=USPATFULL ABB=ON  L25 AND ?UNSAT?
L30         1 SEA L26

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=> d ibib abs 130 1-1

L30 ANSWER 1 OF 1 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-512444 [52] WPIDS
DOC. NO. CPI: C2005-155379 [52]
TITLE: Preparation of ether and optionally
diol and/or lactone, comprises
hydrogenation of organic feed material in the
presence of hydrogen
DERWENT CLASS: A41; E13
INVENTOR: BACKES A F; HILES A G; SUTTON D M; BACKES A; HILES A;
SUTTON D
PATENT ASSIGNEE: (POGC-C) DAVY PROCESS TECHNOLOGY LTD
COUNTRY COUNT: 107

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005058855	A1	20050630	(200552)*	EN	30[3]	
NO 2006003214	A	20060711	(200655)	NO		
EP 1694661	A1	20060830	(200657)	EN		
AU 2004299317	A1	20050630	(200680)	EN		
MX 2006006780	A1	20060901	(200706)	ES		
BR 2004017625	A	20070327	(200725)	PT		
US 20070088169	A1	20070419	(200729)	EN		
KR 2006111584	A	20061027	(200731)	KO		
CN 1890230	A	20070103	(200740)	ZH		
JP 2007516978	W	20070628	(200744)	JA	20	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005058855	A1	WO 2004-GB5054	20041201
AU 2004299317	A1	AU 2004-299317	20041201
BR 2004017625	A	BR 2004-17625	20041201
CN 1890230	A	CN 2004-80035623	20041201
EP 1694661	A1	EP 2004-801255	20041201
NO 2006003214	A	WO 2004-GB5054	20041201

EP 1694661 A1	WO 2004-GB5054 20041201
MX 2006006780 A1	WO 2004-GB5054 20041201
BR 2004017625 A	WO 2004-GB5054 20041201
US 20070088169 A1	WO 2004-GB5054 20041201
KR 2006111584 A	WO 2004-GB5054 20041201
MX 2006006780 A1	MX 2006-6780 20060615
KR 2006111584 A	KR 2006-712060 20060616
NO 2006003214 A	NO 2006-3214 20060711
US 20070088169 A1	US 2006-582370 20060911
JP 2007516978 W	WO 2004-GB5054 20041201
JP 2007516978 W	JP 2006-544534 20041201

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1694661	A1 Based on	WO 2005058855 A
AU 2004299317	A1 Based on	WO 2005058855 A
MX 2006006780	A1 Based on	WO 2005058855 A
BR 2004017625	A Based on	WO 2005058855 A
KR 2006111584	A Based on	WO 2005058855 A
JP 2007516978	W Based on	WO 2005058855 A

PRIORITY APPLN. INFO: GB 2003-29152 20031216

AN 2005-512444 [52] WPIDS

AB WO 2005058855 A1 UPAB: 20051223

NOVELTY - Preparation of an ether and optionally a diol and/or a lactone comprises supplying a stream comprising at least a portion of the organic feed material to a pre-reactor zone comprising catalyst and operating under reaction conditions and contacting the feed with a hydrogen containing stream such that at least some of the carbon carbon double bonds are saturated, vaporizing, supplying the hydrogen -containing stream, recovering and recycling

DETAILED DESCRIPTION - Preparation of an ether and optionally a diol and/or a lactone comprises supplying a stream comprising at least a portion of the organic feed material (e.g. unsaturated dicarboxylic acids and/or anhydrides, mono-di ester of mono-esters of unsaturated dicarboxylic acids and/or anhydrides and/or unsaturated lactones) to a pre-reactor zone comprising catalyst and operating under reaction conditions and contacting the feed with a hydrogen containing stream such that at least some of the carbon carbon double bonds are

saturated, vaporizing the at least partly saturated feed into the hydrogen containing stream in a vaporizing zone, supplying the hydrogen-containing stream containing the vaporized at least partially saturated feed to a reaction zone comprising catalyst and operating under reaction conditions, recovering from the reaction zone a product stream comprising the ether and optionally diol and/or lactone and recycling depleted hydrogen-containing stream to at least the pre -reactor zone or the vaporization zone.

USE - (I) is useful for the production of ethers, especially cyclic ethers such as tetrahydrofuran usually with at least some butane-1,4- diol and optionally some gamma-butyrolactone from hydrocarbon feedstock.

ADVANTAGE - Adiabatic rise across a vapor phase reactor can be reduced to allow the cycle gas loading to be increased for a given reactor exit temperature. The process maximizes the efficiency of the reaction whilst minimizing the cost per unit of product.

SEARCH HISTORY

=> d his ful

(FILE 'HOME' ENTERED AT 13:35:36 ON 23 SEP 2007)

FILE 'HCAPLUS' ENTERED AT 13:35:55 ON 23 SEP 2007

E BACKES ADRIAN FRANCIS/AU
 L1 3 SEA ABB=ON ("BACKES A"/AU OR "BACKES ADRIAN FRANCIS"/AU)
 E HILES ANDREW GEORGE/AU
 L2 18 SEA ABB=ON ("HILES ANDREW G"/AU OR "HILES ANDREW GEORGE"/AU)
 E SUTTON DAVID MARK/AU
 L3 6 SEA ABB=ON ("SUTTON DAVID M C"/AU OR "SUTTON DAVID MARK"/AU)
 L4 2 SEA ABB=ON L1 AND L2 AND L3
 L5 ANALYZE L4 1 CT : 5 TERMS

FILE 'REGISTRY' ENTERED AT 13:37:59 ON 23 SEP 2007

L6 0 SEA ABB=ON LACTONES/CN
 E LACTONES/CN
 E LACTONE/CN
 E DICARBOXYLIC ACIDS/CN
 E DICARBOXYLIC ACID/CN
 L7 1 SEA ABB=ON CARBON/CN

FILE 'HCAPLUS' ENTERED AT 13:39:20 ON 23 SEP 2007

L8 95808 SEA ABB=ON ?ETHER?(4A)?PREP?
 L9 11236 SEA ABB=ON L8 AND (?DIOL? OR ?LACTONE?)
 L10 2 SEA ABB=ON L9 AND ?ORGANIC?(W) (?FEED? OR ?FOOD?)
 L11 19 SEA ABB=ON L9 AND (?DICARBOXYLIC?(W) ((?ACID? OR ?ANHYDRID? OR
 ?ESTER?)) (4A)?UNSAT?)
 L12 2636 SEA ABB=ON L9 AND (?VAPOR? OR ?CATALYST? OR (?PRE?(W)?REACT?
 OR ?PREREACT?))
 L13 488 SEA ABB=ON L12 AND (?CONTACT?(W)?AREA? OR ?HYDROGEN?)
 L14 8 SEA ABB=ON L13 AND (L7 OR ?CARBON?) (4A) (?DOUBLE?(W)?BOND?)
 L15 19 SEA ABB=ON L13 AND ?LIQUID?(W)?PHASE?
 L16 46 SEA ABB=ON L10 OR L11 OR L14 OR L15
 L17 3 SEA ABB=ON L16 AND ?ORGANIC?(4A)?SOLV?
 L18 46 SEA ABB=ON L16 OR L17
 L19 26 SEA ABB=ON L18 AND ?UNSAT?

FILE 'USPATFULL' ENTERED AT 13:47:24 ON 23 SEP 2007

L21 20637 SEA ABB=ON L9 AND (?VAPOR? OR ?CATALYST? OR (PRE(W)?REACT? OR
 ?PREREACT?))
 L22 17471 SEA ABB=ON L21 AND (?CONTACT?(W)?AREA? OR ?HYDROGEN?)
 L23 1910 SEA ABB=ON L22 AND (L7 OR ?CARBON?) (4A) ?DOUBLE?(W)?BOND?
 L24 109 SEA ABB=ON L23 AND ?LIQUID?(W)?PHASE?
 L25 74 SEA ABB=ON L24 AND ?ORGANIC?(4A)?SOLV?
 L26 63 SEA ABB=ON L25 AND ?UNSAT?

FILE 'HCAPLUS, USPATFULL' ENTERED AT 13:50:31 ON 23 SEP 2007

L28 71 DUP REMOV L20 L27 (0 DUPLICATES REMOVED)
 L29 37 SEA ABB=ON L28 AND ?CARBOXYLIC?(W) ?ACID?(P) ?REACT?

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JAPIO, AGRICOLA, CABA, CROPB, CROPR, CROPU, FSTA, FROSTI, LIFESCI' ENTERED AT 13:51:47 ON 23 SEP 2007

L30 1 SEA ABB=ON L26

FILE HOME

FILE HCAPLUS

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FILE LAST UPDATED: 21 Sep 2007 (20070921/ED)

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DICTIONARY FILE UPDATES: 21 SEP 2007 HIGHEST RN 947723-94-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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<http://www.cas.org/support/stngen/stndoc/properties.html>

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 20 Sep 2007 (20070920/PD)
FILE LAST UPDATED: 20 Sep 2007 (20070920/ED)
HIGHEST GRANTED PATENT NUMBER: US7272859
HIGHEST APPLICATION PUBLICATION NUMBER: US2007220648
CA INDEXING IS CURRENT THROUGH 20 Sep 2007 (20070920/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 20 Sep 2007 (20070920/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2007
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2007

FILE MEDLINE

FILE LAST UPDATED: 22 Sep 2007 (20070922/UP). FILE COVERS 1950 TO DATE.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1926 TO DATE.

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CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 20 September 2007 (20070920/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE EMBASE

FILE COVERS 1974 TO 20 Sep 2007 (20070920/ED)

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS

FILE LAST UPDATED: 19 SEP 2007 <20070919/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE: 200760 <200760/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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>>> Indian patent publication number format enhanced in DWPI - see NEWS <<

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<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

>>> FOR DETAILS ON THE NEW AND ENHANCED DERWENT WORLD PATENTS INDEX
PLEASE SEE
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

FILE JAPIO

FILE LAST UPDATED: 10 SEP 2007 <20070910/UP>
FILE COVERS APRIL 1973 TO MAY 31, 2007

>>> GRAPHIC IMAGES AVAILABLE <<<

FILE AGRICOLA

FILE COVERS 1970 TO 11 Sep 2007 (20070911/ED)

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FILE CABA
FILE COVERS 1973 TO 7 Sep 2007 (20070907/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

The CABA file was reloaded 7 December 2003. Enter HELP RLOAD for details.

FILE CROPB
FILE LAST LOADED: 11 NOV 94 <941111/UP>

FILE CROPR
FILE LAST RELOADED: 17 FEB 2004 <20040217/UP>

FILE CROPU
FILE LAST UPDATED: 5 JAN 2004 <20040105/UP>
FILE COVERS 1985 TO 2003

<<< CROPU IS A STATIC FILE WITH NO UPDATES >>>

FILE FSTA
FILE LAST UPDATED: 17 SEP 2007 <20070917/UP>
FILE COVERS 1969 TO DATE.

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INDEX (/BI) FIELD <<<

>>> NEW EIGHT EDITION THESAURUS NOW AVAILABLE ONLINE <<<

FILE FROSTI
FILE LAST UPDATED: 19 SEP 2007 <20070919/UP>
FILE COVERS 1972 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE LIFESCI
FILE COVERS 1978 TO 18 Sep 2007 (20070918/ED)